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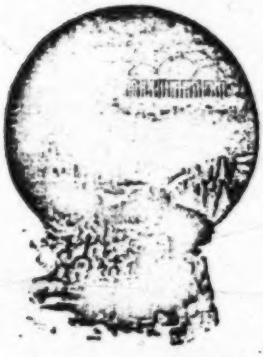
BULLETIN 112

AN INTRODUCTION TO PAWNEE ARCHEOLOGY

BY

WALDO RUDOLPH WEDEL



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LETTER OF TRANSMITTAL

SMITHSONIAN INSTITUTION,
BUREAU OF AMERICAN ETHNOLOGY,
Washington, D. C., July 1, 1935.

SIR: I have the honor to submit the accompanying manuscript, entitled "An Introduction to Pawnee Archeology", by Waldo Rudolph Wedel, and to recommend that it be published as a bulletin of the Bureau of American Ethnology.

Very respectfully yours,

M. W. STIRLING, *Chief.*

Dr. C. G. ABBOT,
Secretary of the Smithsonian Institution.

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PREFACE

The Pawnee have been known to white men since, probably, 1541, and certainly since 1673. They were the most numerous and powerful of the tribes constituting the Caddoan linguistic stock and one of the most important of the entire Plains area. Since the earliest definite historic mention of them they have been resident in Nebraska and the extreme northern portion of Kansas, particularly on the Loup, Platte, and Republican Rivers. As a tribe they were always friendly to the Europeans and later to the Americans, rendering invaluable aid as scouts in the Indian troubles on the Plains during the middle half of the nineteenth century; and that despite the half-hearted and tardy attentions that too often characterized the Government's relations with them.

The tribe has been variously described by early explorers, missionaries, fur traders, Army officers, and travelers, many of whom left very valuable and worth-while accounts concerning them in their native habitat in the Loup and Platte Valleys. In more recent years, on their reservation in Oklahoma, they have been studied by linguists and ethnologists, though much of this material is still unpublished. Of outstanding note among the available treatises in this field is the work of Dunbar in general ethnology, of Dorsey in mythology, of Grinnell in folk-tales, and of Murie in social and political organization. Archeological remains, surprisingly rich and numerous at many of the old village sites formerly occupied by the tribe, have received but little systematic attention up to the present, save for the excellent beginnings made by a few local collectors. Yet it is this latter, long-neglected field of research which must come to be more and more drawn upon for information regarding this fast-vanishing tribe and its native culture.

The primary purpose of this paper, as originally planned, was to present a purely objective preliminary report on the archeology of the Pawnee, drawing together all data at present available and recording it in systematic fashion. More or less inadvertently, the scope was broadened to include a review of the traditions dealing with the origin and early movements of the tribe, as well as a concise summary of the documentary history of the tribe from 1541 to 1876. To this were added brief notes on the environment of the group, and such other significant facts as may be helpful to an understanding of the subject. The social, political, and religious phases

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121 of Pawnee culture, as well as their general ethnology, have been deliberately avoided, since most of these have been treated at length elsewhere. Finally, correlations have been made with other cultures of adjoining areas with a view to determining as far as possible where the roots of Pawnee culture lie.

114 The principal source for the archeological data embodied in this 127 paper is the Hill collection at the Hastings (Nebr.) Museum. This collection, gathered over a period of more than 18 years by Mr. A. T. Hill, Hastings business man and director of the Nebraska State Historical Society Museum at Lincoln, is unequaled by any in the field of Pawnee archeology. Most of the specimens were secured from the Hill site, now the property of Mr. Hill, but there is in addition much comparative material from other historic Pawnee and prehistoric sites in central and southern Nebraska. Through the courtesy of Mr. Hill the writer was enabled to spend 2 weeks in a study of these exhibits, at which time the bulk of the information was obtained. The known Pawnee material recovered by the Nebraska Archaeological Survey, of which the writer was a member during the summer of 1930, has also been drawn upon. This was secured mainly from the Hill site and corroborates generally the facts reached through study of the Hill collections. Mention should also be made of the excellent collection of surface material in the possession of Mr. Alfred Tichacek, of Linwood, Nebr., all of which comes from the early Pawnee site near that town. On two different occasions access was had to these specimens for study purposes. In addition, small collections made by various amateur collectors and, as far as available, those of the Nebraska Historical Society, were also examined.

The paper, intended as a basic approach to the study of prehistory in the Pawnee area, was originally completed in the spring of 1931. Lack of funds prevented publication at the time, however, and the rapid accumulation of new data from the region has made possible revision from time to time of the sections dealing with archeological details. Final revision was made in November 1935, bringing the paper so far as possible up to date in the light of researches made since its inception. For a review of Pawnee archeology and its relation to other Nebraska cultures, the reader is referred to Dr. W. D. Strong's recent publication (An Introduction to Nebraska Archeology, Smithson. Misc. Colls., vol. 93, no. 10, 1935), in part based upon investigations which were coincident with or immediately subsequent to those here described. The results of other and more recent work in the area, dealing primarily with prehistoric sites, will be found in the present writer's reports in the Nebraska History Magazine, vol. 14, no. 3, 1934, and vol. 15, no. 3, 1935. Findings of the Nebraska State Historical Society in historic Pawnee sites at

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Leshara and Blue Springs in the summer of 1935 have not yet been made public, but a hurried examination by the author of the artifacts and records at Lincoln indicates a general agreement with the material on which the present introductory work is based.

The writer wishes to acknowledge, first of all, his deep indebtedness to Dr. William Duncan Strong, of the Bureau of American Ethnology, formerly professor of anthropology at the University of Nebraska and director of the Nebraska Archaeological Survey (1929–31), who first suggested and outlined the paper, for his constant encouragement, constructive criticism, and assistance all through its preparation. To Mr. A. T. Hill, of Hastings, are due sincere thanks for his splendid cooperation in the field of Pawnee archeology, and also for invaluable suggestions with regard to the history and ethnogeography of the tribe. Without his assistance the work would have been greatly curtailed in many of its phases. Mr. John L. Champe, of Lincoln, very generously prepared the photostat copies of early maps for use in conjunction with the historical sketch; Mr. Clarence Reckmeyer, of Fremont, contributed helpful information on early Pawnee history; and Mr. C. B. Schultz, of Lincoln, assisted in the preparation of certain of the modern maps. To these individuals, and to those others who at one time or another rendered assistance during the course of the work, grateful acknowledgment is here made.

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AN INTRODUCTION TO PAWNEE ARCHEOLOGY

By Waldo Rudolph Wedel

INTRODUCTION

Linguistic Affiliations of the Pawnee

Since actual linguistic relationship is a sure index of former historical contacts between peoples, it will be of value first to briefly review the results of this line of research as applied to the Pawnee. Lewis and Clark, to whom we are indebted for the earliest attempt to trace Pawnee speech relationship, divide them into 4 bands, 3 of which resided on the Platte, while the fourth had established itself on the Red River;[1] of the Arikara they state that "they were originally colonies of Pawnees."[2] The first linguist to classify the Pawnee was Albert Gallatin, who in 1836,[3] and again in 1853,[4] classified the Pawnee and Arikara together as the Pawnee linguistic stock, but did not include the fourth tribe mentioned by Lewis and Clark. Later, Hayden,[5] on the basis of linguistic researches among the tribes of the upper Missouri River, likewise included the Arikara as members of the Pawnee group. Unlike Gallatin, however, he took cognizance of the work of Lewis and Clark, treating the fourth or Red River band as the "Huecos" and "Witchitas." The Caddo, Kichai, and other southern tribes were not included with the Pawnee in these earlier classifications.

The next general classification of North American languages, made under the direction of Maj. J. W. Powell,[6] has stood for nearly 50 years. Under this grouping the various Pawnee bands or tribes were included in the Caddoan linguistic stock which was subdivided into three regional subfamilies. The Arikara of the upper Missouri (most closely related to the Skidi Band of the Pawnee) represented the northern division. The middle group consisted of the four bands collectively known as "Pawnee." The southern division, oc-

[1] 1815, vol. i, p. 45.
[2] Ibid., p. 142.
[3] 1836, vol. ii, pp. 128, 306.
[4] Schoolcraft, 1853, vol. iii, p. 402.
[5] 1862, p. 345.
[6] 1891, pp. 58–62.

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cupying lands on the Red River and to the south, included the closely related Wichita as well as the Waco, Caddo, Kichai, Anadarko, and Tawakoni; there were several smaller groups also, now virtually extinct. Alien linguistic stocks isolated these three Caddoan groups more or less completely from each other. Siouan tribes, namely the Ponca, Omaha, and Dakota, occupied the territory between the Pawnee and the Arikara, while between the Pawnee and the southern Caddoans were still other tribes of diverse linguistic affiliations; Kansa and Osage in the east and Cheyenne, Arapaho, Kiowa, and other nomadic tribes in the west.

The latest and most radical linguistic amalgamation of speech families north of Mexico is that of Sapir,[7] who reduces the 55 separate stocks of the Powell classification to 6 major groupings. According to Sapir, the Caddoan tribes are linked with the Iroquoian tribes in one subfamily of the greater Hokan-Siouan linguistic stock. Based upon deep-lying structural and morphological parallels, this new classification carries very suggestive and far-reaching implications, certain of which will be touched on hereafter.

Origin of the Name Pawnee

The name Pawnee is of somewhat uncertain origin. Dunbar[8] derives it from *pa'-rik-i*, a horn, as an outgrowth of the typical Pawnee mode of dressing the scalp lock. The head of the warrior was shaven except for a small tuft or topknot which was daubed with bison fat and red ochre until stiff enough to stand erect, or curving slightly backward, like a horn. Since this was the most conspicuous feature of the individual it gave rise to the particular designation which ultimately became the name of the tribe. Formerly, according to the same authority, the term included the *Pawnee Picts*, or Wichita, and the Arikara. Arache, Arahei, Arae, Harahey, and Ahuache, names by which the Pawnee "kingdom" was known to the Spanish during the sixteenth and seventeenth centuries,[9] are then probably derivatives from *pa'-rik-i*, assuming this to have been actually the original designation for the tribe. However, as early as 1673 Marquette[10] used the term *Pana;* Valverde[11] speaks of the *Panana* in 1719; and thereafter, at least until the end of the eighteenth century, *Panis* and *Panimaha* are regularly employed in referring to the Pawnee. Just how these names were derived from *pa'-rik-i*, if indeed they ever were, is far from clear, nor does Dunbar show the orthographic and phonetic changes that would have taken place in such a process. The

[7] 1929, pp. 138–140; see also Parker, 1916, p. 483.
[8] 1880, a, p. 245. Compare, however, Lesser and Weltfish, 1932, p. 5.
[9] Winship, 1896, pp. 529, 577, 588, 590; Margry Papers, vol. VI, p. 310
[10] 1900, map facing p. 108.
[11] Bandelier, 1890, a, p. 185.

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term "Pani" was employed by the French during the seventeenth and eighteenth centuries to designate all Indian slaves, regardless of tribal affiliations, perhaps because the majority of such slaves were captives from the tribe known as *Panis*.[12] Conversely, however, it has been suggested that the tribe may have derived its name from the old French term, without its originally having been connected with them at all.[13] The older form, "Páni", survived until the beginning of the nineteenth century, when, largely through the agency of early American explorers, it was superseded by the modern Pawnee, rarely Pawney.[14] Among themselves the people are called *Chahiksi-chahiks*, or "men of men."

Names and General Organization of the Bands

The unit of tribal organization among the Pawnee was the band.[15] There were four of these, each in turn consisting of several subbands and villages. The main bands, which are sufficient for present purposes, were known as the *Chaui* or Grand, the *Kitkehahki* or Republican, the *Pitahauerat* or Tappage, and the *Skidi*, or Wolf, Pawnee. Ordinarily each functioned as an independent unit, retaining charge of its own administrative and other affairs through a hereditary, but often purely nominal, chief, who was assisted in matters of importance by secondary chiefs and a council of the leading men. The Grands were generally recognized as the leading band, and where situations arose involving relationships between the several bands, or affecting the tribe as a whole, the principal chief of the Grands acted as spokesman and adviser for the entire tribe. The bands were endogamous, and each possessed its own sacred bundles and certain accompanying rituals, besides participatory privileges in various tribal ceremonies. The Skidi appear to have been less closely bound to the other bands than were these to one another, and they may have sprung from a somewhat different ancestry, or else possibly represent an earlier offshoot from the parent stock. In the present discussion the bands will be designated by their anglicized names, with the exception of the Skidi.

Historic Habitat and Its Geographical Features

The territory claimed by the Pawnee was bounded on the north by the Niobrara River, on the south by the Arkansas or possibly the Canadian, on the east by the Missouri, and on the west extended rather indefinitely toward the Rockies. Actually, however, it was

[12] Handbook of American Indians, Bull. 30, Bur. Amer. Ethn., pt. 2, p. 199.
[13] Idem. Compare Lesser and Weltfish, op. cit.
[14] Ashley and Smith, 1918, p. 119.
[15] See Murie, 1914, pp. 549 ff.

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much more limited. On the west the *Padouca* (Comanche) were firmly established in the forks of the Dismal River,[16] on the shores of some of the lakes in the sandhill region of the present Cherry County, Nebr.,[17] and on the upper reaches of the Smoky Hill River[18] in the present northern Kansas. Between Pawnee and *Padouca* there was incessant warfare, and it is unlikely that the former at any time ventured far beyond the forks of the Platte, save on occasional war or hunting trips. Early in the nineteenth century the *Padouca* were pushed southward by the Cheyenne, Arapaho, and Teton Dakota, who formed an equally effective check against westward movements by the Pawnee. On the east the Omaha controlled a large area north of the Platte from Shell Creek to the mouth of the Niobrara, and south of the Platte the Oto claimed as theirs the lands lying east of the Big Blue and north of the Big Nemaha. From the Big Nemaha south to the Kansas River and west to the Republican the Kansa were in undisputed possession, and south of this tribe the equally hostile Osage roamed westward nearly to the great bend of the Arkansas. The actual area over which the Pawnee hunted and exercised chief control was thus a strip, as follows: Commencing with the Niobrara (between its mouth and Plum Creek) and extending southward to include the Platte between Shell Creek and the present city of North Platte, thence into Kansas to include the Smoky Hill drainage between the Republican River and the ninety-ninth meridian, with the western periphery then swinging westward by south toward the upper reaches of the Arkansas, while the eastern limit ran toward the southwestern corner of present Kansas. (See map 1. Compare Strong, 1935, fig. 2.) The permanent villages of the tribe were located in the valleys of the lower Loup and Platte Rivers, and on the Republican, in the present State of Nebraska; the region to the south served solely as hunting and wintering grounds, and Pawnee claims were often disputed or ignored by neighboring tribes.

Generally speaking, the region which formerly constituted the Pawnee demesne, as above described, is a high, dry, grass-covered plain, or more accurately, a series of plains interspersed with river valleys. The northern portion, lying within the borders of the present State of Nebraska, includes several thousand square miles of the great loess mantle deposited during or shortly following the Pleistocene glaciation of the region. North of the Platte erosion has progressed sufficiently to produce a hilly and broken topography, consisting of small loess plains and canyons grading into loess-capped hills toward the east. A great wedge of dune lands and sand

[16] Fletcher and La Flesche, 1911, pp. 88, 91. However, compare Grinnell, 1920, p. 260.
[17] Dorsey, J. O., 1886, p. 220.
[18] Margry Papers, vol. VI, pp. 398–448.

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hills, representing the eastward extension of the Sandhill province of central Nebraska, covers much of the territory north of the Platte, especially the northern and western parts. The Loup, tributary to the Platte, with its North, Middle, and South Forks, augmented by the Dismal and Calamus Rivers, effects the drainage. These streams all have their sources in the sand hills and are characterized by a steady, abundant flow of excellent water, relatively deep valleys, and scant fringes of timber. Between the Platte and the Republican Rivers lies the high, monotonously flat loess plain of southern Nebraska, but little modified by erosion save where the margins have been deeply incised by short creeks tributary to larger bordering rivers. The Blue River, on the east, is the only stream of any size between the Platte and the Republican. South of the Republican the terrain becomes rather more uniform. A succession of broad grassy upland divides, trending generally west-east, and separating valleys of the Solomon, Saline, Smoky Hill, and Arkansas Rivers, are the principal physiographic features, culminating in the flat, featureless plains of western and southern Kansas. 133

As everywhere on the great plains, grasses are, or were formerly, the dominant plant forms in the Pawnee area. Trees were almost universally absent on the uplands, and at least as late as 1833 the Platte and Loup Valleys were almost devoid of timber, save on some of the larger islands.[19] In the Republican Valley and also in the Smoky Hill drainage, however, timber was more abundant. Cottonwood, several species of willow, burr oak, and elm dominated the more immediate river banks and islands, while less commonly black walnut, honey locust, hackberry, boxelder, ash, and red cedar were encountered. For the most part the tree forms represented the westward extension of the forests of Missouri, following up the valleys especially of streams draining through the Kansas River into the Missouri, and interfingering with the prairie uplands more typical of the western plains. Chokecherries, wild plums, grapes, and wild black cherries grew plentifully along the smaller streams and creeks, and wild potatoes, turnips, and turkey peas flourished in the sandy valleys of the Platte, Loup, and Republican Rivers. All of the last-named plants provided important articles of diet. Of game there was also ample variety. Herds of bison wandered northward beyond the Platte, becoming more plentiful to the west and south, and their meat, next to maize, formed the main food staple. Beaver formerly abounded in the Elkhorn, Republican, Smoky Hill, and other wooded streams, and, along with elk, deer, bear, wolves, and wildcat, in early historic times formed the basis for a traffic in peltries amounting to thousands of dollars annually, to say nothing of their value as food sources. 137 136 [262] [439 281]

[19] Irving, 1835, vol. II, p. 10; also Long, 1823, vol. I, p. 446.

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136 of their value as food sources. Smaller animals, such as rabbits, opossum, raccoon, and squirrel, were also to be had. Ducks, geese, and other waterfowl were plentiful and fish abounded in most of the streams.

133 All of the major streams carry water the year round, although the Platte during the summer months becomes largely a subterranean river above its junction with the Loup. With the exception of those in the sand hills, the streams flow characteristically in broad, flat alluvial valleys, from 3 to 15 miles wide, and bordered by bluffs up to 250 feet in height. The historic villages were apparently all [36] located in the large river valleys rather than on the small tributary creeks; only the chase, war forays, or migrations seem to have led village tribes such as the Pawnee out upon the interfluvial areas.

778 It may be noted here that the "sacred places" of the Pawnee, 823 where the *Nahu'rac*, or miraculously endowed animals, met in coun- 825 cil, were all associated with the streams. There were five of these, according to Grinnell.[20] One was "at *Pa-hŭk'*, on the south side of the Platte River, opposite the town of Fremont, in Nebraska. The word *Pa-hŭk'* means 'hill island.' Another animal home is under an island in the Platte River, near the town of Central City. It is called by the Pawnee *La-la-wa-koh-ti-to*, meaning 'dark island.' The third of these sacred places is on the Loup Fork, opposite the mouth of the Cedar River, and under a high white cut bank. It is called *Ah-ka-wit-akol*, 'white bank.' Another is on the Solomon River, *Kits-a-wits-ŭk*, 'water on a bank'; it is called *Pa'howa* sometimes. This is a mound, shaped like a dirt lodge. At the top of the mound, in the middle, is a round hole, in which, down below, [782] can be seen water. At certain times the people gather there and throw into this hole their offerings to *Ti-ra'-wa*, blankets and robes, blue beads, tobacco, eagle feathers, and moccasins. Sometimes, when they are gathered there, the water rises to the top of the hole and flows out, running down the side of the mound into the river. Then the mothers take their little children and sprinkle the water over them and pray to *Ti-ra'-wa* to bless them. The water running out of the hole often carries with it the offerings, and the ground is covered with the old rotten things that have been thrown in. [This clearly refers to the mineral spring now known as Waconda, or Great Spirit, Springs, situated 2½ miles southeast of Cawker City, Mitchell County, Kans.[21]] The fifth place is a hard, smooth, flinty rock, sticking up out of the ground. They call it *Pa-hŭr'*, 'hill that points the way.' In the side of the hill there is a great hole where the *Nahu'rac* hold councils. This hill is in Kansas and can be

[20] 1893, p. 358.
[21] Bailey, 1902, pp. 197–200.

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seen from the Burlington and Missouri River Railroad. It is known to the whites as Guide Rock."[22]

HISTORICAL BACKGROUND

TRADITIONS

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Pawnee history, as herein discussed, consists of two major periods or divisions: First, the period of legend and tradition, which is concerned primarily with the origin and migrations of the tribe in a dim and distant past; and secondly, the period of recorded history, beginning in 1541, with the first contact between Europeans and Pawnee, and continuing down to 1876, the date of final removal of the tribe from its home on the Loup and its confinement on a reservation in the then Indian Territory. For information on the first period the traditions recorded by Dunbar, Dorsey, and Grinnell are our main source, hence are here briefly reviewed; and for the later period, the accounts of European and American explorers and travelers are drawn up in chronological sequence, particularly as relates to the location of the villages of the different bands.

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The ancient habitat of the Pawnee, prior to their occupation of the Platte and Loup Valleys, lay traditionally to the south or southwest. Dunbar,[23] whose authority on this point is generally accepted, states that the traditions of the Grand, Republican, and Tappage bands "coincide in stating that the Pawnee migrated to the Platte River region from the south, and secured possession of it by conquest."[24]

This is partially corroborated by a Wichita legend, according to which the "primitive home" of the two tribes, Pawnee and Wichita, was "upon the Red River, below the mouth of the Washita",[25] in eastern Oklahoma or Arkansas, whence they wandered northward together. The same authority says relative to the Skidi that the "traditions of the other three bands are very positive in affirming that they are the remnant of a once separate tribe that has been subdued and incorporated into the Pawnee family";[26] the Otos, Poncas, and Omahas were conquered at the same time.[27]

Dorsey[28] traces three of the bands back to a single ancestral tribe, called the *Kawarakkis*, which dwelt near the confluence of the Little Nemaha with the Missouri in the southeastern corner of the present

[22] According to Mr. A. T. Hill, the "hill that points the way" is actually about 2 miles north of the Kansas-Nebraska line, on the south side of the Republican River, directly south of the town of Guide Rock, Webster County, Nebr.
[23] Dunbar, J. B., 1880, a, pp. 251 ff.
[24] Ibid., p. 251.
[25] Idem.
[26] Ibid., p. 253.
[27] Ibid. p. 252.
[28] Dorsey, G. A., 1906, p. 8.

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173 State of Nebraska. In course of time this tribe split up into bands and became scattered; the Grands proceeded northward to establish themselves on the Platte, while the Republicans moved westward to the Republican River, where Pike visited them in 1806. At a much later date, but apparently early in the nineteenth century, the remnants of the *Kawarahkis*, now known as the Pitahauerat or Tappage band, also removed to the northwest, to settle between the Grands and the Republicans, the latter band having meanwhile shifted its place of residence from the Republican River to the Loup. The Skidi and Arikara were formerly a single tribe,[79] according to this investigator; and he concludes this phase of his discussion with the pertinent observation that "there is some reason for believing that these three bands (i. e., the Grand, Republican, and Tappage) represent offshoots of the original Skidi through the single band of the *Kawarahkis*."[80]

Grinnell[81] records two traditions, both of especial value because of the relative completeness with which they are carried out as compared with most of the other accounts. The first of these, unknown to any save the very old men of the tribe, relates that the Pawnee migrated long ago from a home in the southwest, where they once lived in stone houses. The Wichita were associated with them at the time and the people pushed northward and eastward as far as the Missouri River, where they stopped for a time and tilled the soil.[82] The Skidi version[83] traces the movement from "far in the southwest, away beyond the Rio Grande," northward past the Wichita Mountains, across the Arkansas River, to "the Mississippi River where the Missouri runs into it." Temporary halts were made near the Wichita Mountains and on the Arkansas to prepare fields and raise corn.

The second tradition was much more generally known to the Pawnee, young as well as old, and is possibly the more recent.[84] It points to a southeastern origin, probably somewhere in the region of the present Missouri or Arkansas, whence the people migrated northward to hunt for bison. In the course of their wanderings they reached the region of the Platte and Republican Rivers, and, being attracted by the fertility of the soil, the abundance of game, and the generally pleasant environment, established themselves permanently. The Wichitas were a part of the Pawnee tribe at the commencement of the northward trek, but left the Pawnee somewhere in southern or southeastern Kansas, and went their own way, mostly

[79] Dorsey, G. A., 1906, p. 8.
[80] Ibid., p. 9.
[81] 1893, pp. 223–231.
[82] Ibid., p. 224.
[83] Ibid., p. 225.
[84] Ibid., p. 225.

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southward, sometimes at peace with their kinsfolk but as often bitterly at war with them.[25] Grinnell points out further that "the traditions of both Skidi and Pawnee speak of a time when they lived in a country where grows the cane which the white men use for fishing poles",[26] presumably an allusion to the canebrakes of the lower Mississippi Valley. 173

Such, briefly outlined, are the major facts which tradition offers toward the reconstruction of the story of the Pawnee prior to the advent of Europeans. The harmonization of these legends, where at variance with one another or with orthodox theories, and their interpretation, will not be attempted until after the presentation of the archeological data, when certain interesting correlations may be suggested.

Documentary History

Turning now from the realm of tradition to that of actual history, we find that the earliest historic reference to the Pawnee occurs in the journals of Coronado's expedition to the Great Plains in 1541. According to Castañeda, the Spaniards found at the pueblo of Cicuye (Pecos) "an Indian slave, a native of the country toward Florida", to whom they gave the appellation of the "Turk, because he looked like one."[27] Under the guidance of the Turk, and accompanied by "another native of Quivira . . . a painted [tattooed?] Indian named Ysopete",[28] Spanish conquistadores marched by a devious route to the prairies of central Kansas in their fruitless quest for the fabled riches of Quivira. The exact location of Quivira will probably never be satisfactorily determined, but Bandelier's conclusions appear at present as the most plausible and hence are here tentatively accepted.[29] To resume the narrative, then, as related by Jaramillo, Coronado halted on or near "a river, with more water and more inhabitants than the others [the Kansas?]", and from this point, the northernmost reached by him as it was also "the end of Quibira",[30] he ordered the "governor of Harahey and Quibira" to present himself for a council. The chief, Tatarrax by name, appeared with 200 naked warriors, who carried bows, "and some sort of things on their heads",[31] the latter an allusion, perhaps, to the *pariki*, or peculiar mode of dressing the scalp lock employed by the Pawnee. The expedition penetrated no farther northward, but Coronado was in- 175

[25] 1893, p. 226.
[26] Ibid., p. 228.
[27] Winship, 1896, p. 482.
[28] Ibid., p. 505; an interesting observation, in view of the fact that the old name for the Wichita, "Pawnee Picta," was derived from their custom of "picturing" or tattooing the body.
[29] 1890, pt. 1, pp. 44, 170; 1893, pp. 235–239.
[30] Winship, 1896, p. 500.
[31] Ibid.

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175 formed that the kingdom or province of Harahey, Arache, or Arahei lay next beyond Quivira, and that the "Rio del Espiritu Santo"[45] flowed through that province. This, like other surrounding provinces, was reported as being thickly populated, but little information is given as to the customs of the inhabitants. It is interesting, as well as rather suggestive, to note that beyond Quivira were two large villages known as Tareque and Arae, "with straw houses at Tareque, and at Arae some of straw and some of skins."[46] The possible significance of this latter statement will be brought out later.

Following the ill-starred Coronado expedition came a series of vaguely recorded and semimythical explorations. Juan de Oñate in 1599 and Saldivar in 1618 led parties northward and eastward from Santa Fe, both reaching Quivira. Hostility on the part of the *Escanjaques* (Kansa or Osage!), however, forced the premature retreat of both expeditions. Oñate is reputed to have reached the thirty-ninth or fortieth parallel, the latter forming the present boundary between Kansas and Nebraska, but records for these explorations are so fragmentary and uncertain as to be of no great value. Neither mentions Harahey or the Pawnees. Much more graphically described is the expedition of Don Penalosa, governor of New Mexico, in 1662, which was formerly supposed to have penetrated as far as the junction of the Loup and Platte Rivers in east central Nebraska. Penalosa wrote eloquently of the wonderful prairies and magnificent forests traversed, and vividly pictured the great city of the Quiviras, many miles in extent, with thousands of wood and timber dwellings up to four stories high, and numberless inhabitants. The narrative is now generally discredited as a synthesis of the reports brought back by previous explorers, to which Penalosa, drawing upon his experiences in the Southwest, appended such details as were necessary to complete the picture and impress the contemporary world. Penalosa probably at no time ventured very far into what is now Kansas, nor is it likely that he actually met the Pawnee.

Disheartened by the continual lack of success in the search for the mines of Quivira, fully occupied with retaining her grasp on the pueblos of Cibola, and impoverished by internal mismanagement, Spain at length abandoned, or rather suspended, her imperialistic endeavors toward the northeast. In the meantime, France was slowly extending the bounds of her possessions westward and southward from Canada, and more important still, northward from French Louisiana. French fur traders and trappers were established perhaps as early as the middle of the seventeenth century

[45] Winship, 1896, pp. 529, 590. See Lesser and Weltfish, 1932, pp. 8-9.
[46] Ibid., p. 577.

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among many tribes of the Missouri Valley, and missionaries and adventurers were but little behind. 175

The earliest reference to the Pawnee, beyond the disputed Coronado narratives, is by the Jesuit priest, Marquette. This observer never visited the tribe, nor is it anywhere mentioned in his journals. On his map, however, prepared in 1673,[44] the *Pana* (Pawnee) are located northwest of the *Otontanta* (Oto), east of the *Pahotet* (Iowa) and some distance north of the Kansa (map 3). Unfortunately, Marquette omitted the Missouri River and its major tributaries; but if these be superimposed on his map, the relative position of these various tribes corresponds generally with their later historic habitat. It will be noted also that on the map a part of the *Paniassa* (Wichita) are west and north of the Kansa tribe, presumably in what is now northern Kansas. This is rather farther to the north than the habitat generally accorded the Wichita, and, if correct, may not be wholly valueless in tracing out the former relationships of that tribe to the Pawnee.

The La Salle brothers were the first to specifically mention the Pawnee tribe in their writings. In 1682 Robert La Salle wrote of—

> the Pana Nation who lives more than 200 leagues to the west, on one of the branches of the Mississippi, and lives there in two villages, one near the other. They are neighbors and allies of the Gattacka [Kiowa-Apache] and Manrboat [Kiowa], who are to the south of their villages and who sell them horses which they steal apparently from the Spaniards of New Mexico.[45] [492]

Since it is not certain whether this was written while La Salle was on the upper or on the lower Mississippi, there is a possibility that it refers to the southern *Pana*, or *Paniouassa*—i. e., the Wichita.[46] Three years later, in 1685, Nicholas La Salle wrote during a descent of the Mississippi:

> We camped near the mouth of a river which falls into the Mississippi. It is called the river of the Missouris. The river comes from the northwest, and is thickly settled from what the savages say. The Panis are on this river very far from its mouth.[47]

Father Louis Hennepin, writing in 1687, located the *Panimaha* (Skidi) on several navigable tributaries of the Missouri. At that time they had "but one Captain and twenty-two villages, the least of which contains two hundred Cabbins."[48] He also speaks of "the Paneassa [Wichita], the Pana [Pawnee proper], the Panaloga [Comanche], and the Metotantes [Oto], each of which is as considerable as the Panimaha." Hennepin did not visit these tribes in

[44] Marquette, 1900, p. 108.
[45] Translated from the Margry Papers, vol. II, p. 291–292.
[46] Cf. Du Tisne, in Margry Papers, vol. VI, p. 311.
[47] La Salle, 1927, p. 5.
[48] Hennepin, 1903, vol. II, p. 442.

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175 person, hence there is in all probability a considerable exaggeration in all of his figures and estimates.

Le Seuer's map [46] of the Missouri and upper Mississippi Valleys, published in 1701 (map 4), credits the *Panimahas* with 12 villages scattered along a branch (the Loup) of the river of the Panis—i. e., the Platte. Farther down this branch are 10 or 12 villages of the *Panis*. The Arikara are indicated as a separate group farther up the Missouri.[47] Le Seuer never visited the Pawnee, nor did he ever publish any accounts concerning them, the map being his sole contribution to their history.

In 1720 came another Spanish gesture toward the coveted regions to the northeast of Santa Fe—the event that has given rise to the "Spanish Caravan" myth. Throughout much of the seventeenth century the Pawnee had been known to the New Mexican settlements, in consequence of plundering and horse-stealing forays against which the Spanish were not altogether successful. The situation became acute when Valverde, on a punitive expedition against the Ute and Comanche in 1719, heard that the French were present among the *Panana* (Pawnee) villages on the Rio de Jesus María (the Platte), 70 leagues (190 miles) north of Quartelejo,[48] in the present Scott County, Kans. Accordingly, in the following summer a force of some fifty Spaniards, augmented by a body of Indian allies, was dispatched under the brave but inexperienced Villazur to visit the Pawnee villages. Villazur's was not a punitive expedition, nor was it an attempt at colonization; it was simply a reconnaissance and an attempt to determine the status of the French among the Pawnee. The party left Santa Fe on June 14, 1720, and less than three months later, on September 6, one of the soldiers of the expedition, Felipe Tamariz, returned to that post with the report that the entire command had been annihilated in a surprise attack by the Indians upon the Spanish camp near the Pawnee villages, with all of the equipment and horses falling into the hands of the attackers, and only a bare handful, perhaps five or six, of the Spaniards escaping with their lives.[49] The journal, which after 1573 was required of every Spanish exploring expedition, was most unfortunately lost, but it is definitely known that Villazur touched at Jicarilla, 40 leagues (110 miles) north of Santa Fe, and at Quartelejo,[50] where he secured his Indian auxiliaries. Thereafter the route is almost wholly a matter of speculation. Bandelier held that the massacre took place on

[46] South Dakota Hist. Coll., vol. 1, p. 49, 1902.
[47] Cf. Will and Spinden, 1906, pp. 94–96.
[48] Bandelier, 1890, a, p. 185.
[49] Ibid., p. 194.
[50] Ibid., p. 196.

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August 16, on the south fork of the Platte River, in the vicinity of the present city of North Platte, Nebr., admitting, however, that it may have occurred much farther down that stream, near its confluence with the Missouri.[84] 175

Villiers, on the basis of a translation of a single leaf from the journal of the ill-fated expedition, found after the battle by the Indians and turned over to French authorities at Kaskaskia, Ill., is of the opinion that the correct location is on the south bank of the Platte River, immediately below the mouth of the Loup River,[85] near the present city of Columbus, Nebr. On this leaf is recorded the march of the expedition from the 7th to the 10th of August, frequent allusions being made to the "Panane" (Pawnee), whose trails were the route followed and whose villages were seen on the last day, and Villiers presumes that the massacre occurred on the following day—that is, on August 11, at the location specified above. However, the geographical data given are so general that the location is at best only tentative, and should be regarded as such. At any rate, by November 1720, news of the massacre had reached Kaskaskia,[86] through the Indians, who appeared at that post with various trophies of the victory. The Pawnee, Oto, or Missouri, or a combination of these three tribes,[87] probably aided by some Frenchmen[88] equipped with muskets, appear to have been responsible for the massacre, and Villiers' location has at least this to commend it, viz, that all of these tribes dwelt on the lower Platte in historic times, and are not known to have occupied villages as far west as the forks of the Platte. The allusion to trails followed by the expedition further supports this view, as the Pawnee are known to have had regular routes southward from the Loup across the Platte near Kearney, Nebr., to their hunting grounds on the Smoky Hill and Arkansas Rivers. Presumably the villages of the Pawnee at the time were situated on the Loup River, with the other two tribes below them on the Platte. Swords, thought by some to be relics of this expedition, have been found in the vicinity, but their identity is open to question. Certain it is that the blow materially reduced Spain's prestige on the plains, as it doubtless emboldened the tribes of the Platte to raid more extensively toward the Spanish Provinces. It was more than 80 years before another Spanish army, this time under Malgares,[89] ventured to the Pawnee towns, and by that time France was enjoying to the full the trade and friendship of the tribe.

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[84] Bandelier, 1890, a, pp. 197–202; see also Thomas, in Hist. Mag., vol. VII, no. 3, 1924, pp. 68–81.
[85] Villiers, 1921, p. 255. See Thomas, 1935, for important new data on this expedition.
[86] Ibid., p. 250; also Margry Papers, vol. VI, pp. 386–387.
[87] Villiers, 1921, p. 240.
[88] Bandelier, 1890, a, p. 203.
[89] Pike, 1810, pp. 145, 149, 227, and App. to pt. II, pp. 23–24.

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175 Almost coeval with the Villazur massacre were the explorations of Du Tisne and De la Harpe, both in 1719. Neither of the two ever actually came in contact with the Pawnee of the north, but Du Tisne wrote that "by the Missouri River one is able to go to the country of the Panimahas, whom other nations call Ahuachis, and from there to that of the Padoukas. . . ."[60] La Harpe[61] locates the *Panis* 40 leagues southwest of the Osagè village, and while some regard this as a typographical error for northwest, it is equally possible that the reference is to the southern Pawnee or Wichita.

Two years later, in 1721, Pierre de Charlevoix visited the upper Missouri and Mississippi Valleys and prepared a lengthy account of his experiences. A single brief allusion, based upon hearsay, states that "the *Panis*, a nation settled on the banks of the Missouri, . . . extended themselves a good way toward New Mexico. . . ."[62]

Various terse allusions to the Pawnee are to be found for the next few decades, mostly recorded in letters to Louisiana or to St. Louis.[63] Du Pratz, on his map of 1757,[64] locates the *Panis* between the Canses and Missouri Rivers, the latter being represented as flowing eastward in about the place actually occupied by the Platte (App., map 5). Du Pratz never visited this particular area, hence his map is geographically inaccurate and somewhat confusing. In 1770, however, appeared a noteworthy document. In that year Mezieres reported that "the Taouaiches nation [the Wichita] has been joined recently by another numerous tribe from the Missouri, namely the Panis-maha."[65] Three years later it was reported that this band of *Panimaha*, or Ouacee, numbered 000 warriors.[66] Bolton locates this group of *Panimaha*, after 1772, on the Red River in the vicinity of the present Marietta, Okla.[67] The estimate of 600 warriors is possibly much too high, but it appears to indicate the secession and permanent southward removal of a considerable body of the Skidi. The causes for this move are not fully known, but apparently there had been some difficulties with the French.[68]

In 1777, under the title "Report of the Indian Tribes who Receive Presents at St. Louis",[69] occurs the first really instructive information on the Pawnee, or at least on two of the bands. The population, enemies, and occupations are given, and the names of the chiefs appear. The *Panis*, five or six hundred warriors strong, are located

[60] Translated from the Margry Papers, vol. VI, p. 310.
[61] Margry Papers, vol. VI, p. 311.
[62] 1903, vol. I, p. 306.
[63] Margry Papers, vol. VI, pp. 383–492.
[64] 1758, vol. I, p. 138.
[65] Bolton, 1914, vol. I, p. 202.
[66] Ibid., vol. II, p. 90.
[67] Ibid., map in vol. I.
[68] Ibid., vol. II, p. 90.
[69] Houck, 1908, vol. I, p. 141.

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"about 15 leagues from the Hotos [Oto] Tribe, on a small stream branching off from the Plata River."[10] This is in all probability one of the twin sites at Linwood, on Skull Creek near the Platte, and was presumably a Grand site. The other band, called *La Republica*, resided "about 110 (leagues) from the Misury [Missouri] River on the shores of the Cances River, and about 40 or 50 leagues from the village of the tribe of that name [at the mouth of the Blue River] by land."[11] The latter reference is of especial interest as preceding by nearly 20 years the date generally accepted as the earliest for the Republican Band of the Pawnee.[12] By the "Cances" here is meant the Republican River.

In the summer of 1794 Jean Baptiste Truteau led a merchandising expedition up the Missouri from St. Louis, bound for the Mandan villages. His journal[13] contains brief allusions to the various Pawnee villages, none of which he ever saw. The *Octata* [Oto] were located at the time 12 leagues up the Platte from its confluence with the Missouri; 25 leagues farther up the same stream was the village of the "grands panis"; and 30 leagues above them, on a tributary of the Platte (doubtless the Loup), were the "panis mahas."[14] There is some uncertainty as to just what stream was the habitat of the Republican Band, due to an unfortunate omission, but under the designation of "panis republicains" Truteau locates them 10 leagues above the "Canses",[15] whose village was 80 leagues from the Missouri on the Kansas River. The Republicans were probably on the Republican River, but very likely were rather more than 10 leagues from the Kansa village.

Two years later (1796) Victor Collot was sent from New Orleans on a military reconnaissance of the Mississippi and Missouri Valleys, penetrating to the mouth of the Osage River. Though a portion of his records were lost, he secured data on tribes far beyond those actually visited by himself. His geography is somewhat at fault, but the map (map 6) shows the Republican Nation on what is without question the Republican River. The "Great Panis" are 12 or 13 leagues above the village of the "Otoktata Nation"[16] at the confluence of the Platte and Missouri and the *Panimaha* are situated at the mouth of the Loup.[17] Inasmuch as Collot was never actually among the Pawnee, but secured his information on them and on their locale through other travelers, his observations are only approximately correct, though probably in a general way fairly reliable.

[10] Houck, 1909, vol. I, p. 144.
[11] Ibid., p. 142.
[12] Powell, 1891, p. 60; see also Lewis and Clark, 1832, p. 709.
[13] 1914 contains part I only.
[14] Ibid., p. 306.
[15] Ibid., p. 303.
[16] 1924, vol. I, p. 281.
[17] Idem.

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1795 John Evans, a Welshman in the employ of the Missouri Co., prepared in 1795 or 1796 a map of the Missouri River from near its mouth to the Mandan villages.[18] This is thought to be the map sent by Jefferson to Captain Lewis before the Lewis and Clark expedition set out in 1804, and is now in the Office of Indian Affairs in Washington. On it is indicated what must be the Oto village near the present town of Yutan, and farther up the Platte, but on the same (south) side of the river just below the mouth of a small creek from the south, is another village, doubtless the present Linwood site. The tribal affinity of neither village is indicated, but the upper site can safely be regarded as Pawnee by inference from earlier and later maps and reports. A village of the *Panis* is also shown just above the mouth of the Niobrara River, and another immediately below the mouth of the Cheyenne River, both presumably Arikara. No Republican or Skidi locations are given.

The final chapter in French exploration on the Missouri was written by Perrin du Lac from 1801 to 1803. In the spring of 1802, according to his narrative,[19] he undertook a journey from St. Louis to the mouth of the White River in the present South Dakota, including a visit to the *Great Panis* 3 days journey up the Platte from the *Otoes*, then probably at the Yutan site. Du Lac's map, probably based upon information supplied by Jacques Mackay, a fur trader, locates the *Grands Panis* on the south bank of the Platte immediately below the mouth of a small tributary (Skull Creek, probably), the *Loups* or *Skidi* some distance up the Loup on the left bank and the village of the *Republiques*, with whom the Grands were at war, on the north bank of the Republican some distance above the point where it turns to flow abruptly southward into the present Kansas (map 7). To all appearances these were approximately the same locations recorded by observers for the next quarter century, as will be pointed out later.

The acquisition of the Louisiana Territory by the United States in 1803 marked the opening of a new era in western development. Almost the first move made by Jefferson after the transfer was to dispatch two major expeditions for a thorough exploration and description of the newly added territory, and on the heels of these came colonization and vast economic changes. The ethnographic observations made by Lewis and Clark, Pike, and the other officers who followed them at intervals of a few years, as well as the work of missionaries and travelers, afford a fascinating panorama of aboriginal life in the Missouri Valley region just prior to its overshadowing and decline before the influence of expanding modern American civilization.

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[18] Abel, A. H., 1916, p. 344.
[19] 1807, pp. 50–54.

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First of the major expeditions was that of Lewis and Clark from 1804 to 1806. While on their way up the Missouri in July 1804 these explorers, encamped some 10 miles above the mouth of the Platte, made the following observations:[20] The Otos were located 30 miles up the Platte on the south bank of the stream; 5 leagues above them on the same side of the stream was the principal band of Pawnee, and 90 miles distant on the Wolf (Loup) fork of the Platte were the Pawnee Loups. The Republican Band had recently migrated from the Republican River to join the principal, or Grand, Pawnee, hence the map (map 8) shows no Pawnee on that stream. In another report[21] the same authors locate the *Panias* proper, 1,600 strong, 30 leagues up the Platte; the *Loups*, self-styled the "*Skee-e-ree*", on the Loup River 36 leagues from its mouth; and the Republicans were associated with the first band, probably at the present Linwood site. The Skidi village on the Loup was perhaps north of what is now Palmer, in Nance County, Nebr., or at least in that general locality.

In the summer of 1806 Lt. Zebulon M. Pike visited the village of the Republican Pawnee while en route to the headwaters of the Arkansas. This village, so far as can be determined from Pike's map (map 9) and his notes on the adjacent physiography,[22] was located on the south bank of the Republican River in what is now Webster County, Nebr., and was doubtless occupied by a different portion of the Republican Band than the party which Lewis and Clark reported previously as having rejoined the Grands. The Grand Pawnees and the Skidi were in about the same locations as given by Lewis and Clark; the former on the Platte, the latter on the Loup. Pike did not venture north of the Republican village, hence there are one or two minor errors in his map showing the villages on the Platte, particularly where he locates the Oto and Missouri village as above that of the Grand Pawnee.

By 1811 marked changes had taken place in the location of several of the Pawnee villages. According to Major Sibley,[23] an officer of the Missouri Co., both Grand and Republican Pawnee had abandoned their old villages and were establishing one jointly in an "elevated level prairie" on the north bank of the Otto (Loup) fork of the Platte, about 120 miles northwest of the Kansa village at the mouth of the Blue River in Kansas. The Skidi were 10 miles farther upstream. The mileage given is probably somewhat short, and from

[20] 1815, vol. I, pp. 35 f.
[21] 1832, pp. 708–709.
[22] Pike, 1810, pp. 141–149; App. to pt. II, pp. 14–15; also Wilkinson, in App. to pt. II, pp. 23–24. This location agrees with Coues' original interpretation of Pike's notes and tallies with those of Nebraska investigators, but is at variance with the opinions of certain Kansas historians. The evidence leading to the present author's conclusion will be presented later. See also Nebraska History Mag., vol. X, 3, 1927, for arguments on both sides.
[23] 1927, pp. 200–203; also Louisiana Gazette, May 16, 1812.

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comparison with subsequent accounts it appears that the villages were then in the present Nance County, Nebr., the Grand-Republican village at the mouth of Horse Creek, and the Skidi village due north of Palmer.

The journal of Maj. S. H. Long's expedition,[84] in 1819, gives very explicit information on the Pawnee. Proceeding up the Loup after crossing Beaver Creek, and 4 miles farther on the Creek of Souls (now Council Creek), the party encamped on "a small creek (now Plum Creek), 11 miles distant from the village of the Grand Pawnees."[85] Evidently this refers to the village at the mouth of Horse Creek. The Republicans had withdrawn from the band and were in a separate village 4 miles above the Grand Pawnee,[86] presumably at the mouth of Cottonwood Creek. Three miles farther upstream, and like the other villages on the immediate bank of the river, were the Skidi,[87] at the site north of the present Palmer. The three villages occupied "about 10 miles in length of the fertile valley of the Wolf [Loup] River. The surface is wholly naked of timber, rising gradually to the river hills, which are broad and low, and from a mile to a mile and a half distant."[88] Throughout, the narrative is sufficiently clear to make the accurate relocation of the villages possible to one familiar with the region described (map 10).

Reports by the Rev. Jedidiah Morse[89] in 1822 and by Captain Ashley[90] in 1824 indicate that the villages of the tribe were still in about the same location at that date. According to Ashley it was 15 miles south to the Platte from the villages "and "Plumb Point", a few miles west of the present Kearney, was the customary crossing place of the Pawnee "on their route to [illegible] wintering grounds on the Arkansas River."[91]

In 1833 Commissioner Ellsworth negotiated a treaty with the Pawnee whereby the tribe ceded to the United States all lands claimed by it lying south of the Platte River. He was accompanied by J. T. Irving, who recorded unofficially many details of the visit to the villages.[92] The Grand Pawnee had abandoned the Horse Creek site where they had been visited by Long and had established their village "at the foot of a long range of hills (and) within about 50 yards of the Platte",[93] on the right bank of the stream. This was

[84] 1823, vol. i.
[85] Ibid., p. 435.
[86] Ibid., pp. 354, 440.
[87] Ibid., p. 354.
[88] Ibid., p. 446.
[89] 1822, pp. 237–238.
[90] 1918, p. 118.
[91] Idem.
[92] Idem.
[93] 1835, vol. II.
[94] Ibid., p. 10.

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probably opposite the present station of Clarks, in Polk County. The Republican Band was about 20 miles to the northwest on the Loup,[95] having apparently removed from where Long saw them on the Cottonwood site to the Horse Creek site evacuated by the Grands. The Tappage Band, here mentioned for the first time, was located 11 miles farther up the Loup,[96] and 10 miles beyond were the Skidi.[97] The last three villages were all situated on a high bank immediately overlooking the river. The distances from the Republican to the Tappage and Skidi villages, as here recorded, are too great to be reconciled with known Pawnee sites in that area, consequently later investigators are inclined to regard them as inaccurate, and to suggest that the Tappage village was actually at the Cottonwood Creek site and the Skidi village near by, at or near the location given by Long.[98]

Catlin, about 1835, referred briefly to the Pawnee as living on the Platte 100 miles above its confluence with the Missouri, occupying "four villages, some few miles apart."[99] It is doubtful whether he ever actually saw the villages, and his rather vague report adds little to our knowledge.

In June 1835 Col. Henry Dodge and a detachment of dragoons marched up the right, or south, bank of the Platte en route to the Rocky Mountains. They passed through the Grand Pawnee village after "having marched 80 miles since leaving the Otto village [at Yutan]."[1] The reference here is to the same village as that where Irving visited the band two years earlier. Dodge mentions the other three bands also,[2] but fails to locate their villages, from which we may infer that they were still on the old sites along the Loup and off the route traveled by the dragoons. Of especial interest is the statement that "the Arickaras had been living with the Pawnee Loups all winter, but were scared away previous to our arrival by a lying Kansas",[3] and the subsequent information that the Arikara had been driven from their habitat on the Missouri by the Sioux.[4] On the expedition's map but one Pawnee village is indicated, and that one opposite the lower end of Grand Island.[5]

Fremont's expedition, while descending the Platte from the Rockies in 1842, halted "at the village of the Grand Pawnee on

[95] 1835, vol. II, p. 87.
[96] Ibid., p. 119.
[97] Ibid., p. 125.
[98] A. T. Hill, personal communication.
[99] 1841, vol. II, pp. 24–27.
[1] Dodge, 1861, p. 133; also map no. 654 B.
[2] Idem.
[3] Idem.
[4] Ibid., p. 136.
[5] Grand Island is some 25 miles above Clarks, but Prairie Island, which may have been mistaken for the former, commences just above the site and extends approximately 10 miles upstream.

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175 the right bank of the river, about 30 miles above the mouth of the
131 Loup Fork."[7] At about the same time Gregg[8] states that the principal village of the tribe was on the Loup Fork of the Platte, probably on the basis of reports by traders and others.

A second detachment of dragoons, Major Wharton in command, visited the Pawnee villages in 1844. A council was held in the Grand village, located "at the point of a projecting ridge", or "headland",[9] on the right bank of the Platte. A few miles upstream was a village of the Republican band, the site of which has never been specifically determined.[10] The villages on the Loup were for the most part abandoned by this time, the Skidi and Tappage having also removed to new locations,[11] farther down the Loup.

The movements of the various bands from 1835 to 1845 are perhaps best recorded in the letters of John Dunbar,[12] Presbyterian missionary who attached himself to the Grand band and was later in charge of the Plum Creek (now Council Creek) mission station. Thus, in 1835, the village of the Grand Pawnee was situated "on the south side of the River Platte, about 120 miles from the mouth of the stream . . . (and) . . . about 30 rods from the water's edge."[13] The following spring he visited the village of the Republican and Tappage bands, 25 miles from that of the Grands, "on a high bluff on the north side of the Loup Fork about 30 miles above its junction with the Platte." Four miles above was the Little Republican village, and 3 miles farther still were the Skidi,[14] both on high steep bluffs overlooking the Loup. By 1839 the Republicans were split into four groups, with their main village "on the south side of the Platte, a short distance above the village of the Grand Pawnees",[15] where, it will be recalled, Wharton also reported them in 1844. By the autumn of 1842 the Tappage, together with many Grands and Republicans, had established "a village of 41 lodges" about a mile from the Plum Creek (now Council Creek) mission, and shortly the Skidi settled 3 miles above on the immediate river bank at the mouth of Willow (Cedar) Creek, about 2 miles east
175 of the present town of Fullerton.[16] On June 27, 1843, a Dakota raid
131 on the lower village culminated disastrously for the Pawnee and
648 they sought the security of the main Grand village south of the

[7] 1845, p. 78.
[8] 1845, vol. II, p. 300.
[9] 1844, p. 20.
[10] Ibid., p. 20.
[11] Ibid., p. 30.
[12] 1918, pp. 570–589.
[13] Ibid., p. 509.
[14] Ibid., pp. 617–618. These three villages are now known as Horse Creek, Cottonwood, and Palmer sites, respectively. See also Long's location of villages in 1819.
[15] Ibid., pp. 637, 640.
[16] Ibid., pp. 643, 656–660.

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Platte.[17] A few months later, however, the fugitives removed again to the Loup, this time to join the Skidi 4 miles from the mission, and in 1844 they were fortifying this village by means of a ditch and turf wall, besides requesting two hundred guns from the government agent for protection against the dreaded Dakota.[18] By the end of the year the greater part of the tribe was settled on the north bank of the Loup,[19] and in 1846, after the hostility of the Sioux and the increasing discontent of the Pawnee had necessitated the abandonment of the mission, Dunbar alludes to "thieves and robbers" south of the Platte in contrast to "Pawnees who have removed north of the Platte".[20] Most of the difficulties experienced by emigrant trains on the Mormon and Oregon Trails through this region, at least after about 1847, were due to the activities of the renegade Pawnee who insisted upon remaining south of the Platte River on lands no longer their own.

Confirmation of this situation is seen in the journal of William Clayton, written in 1847, as accurate as it is interesting. Clayton was with the first party of Mormons to travel over this trail, and his observations on the Pawnee, though not extensive, afford a good check on some of the other reports. The party proceeded up the left bank of the Loup, all distances being computed from the recorded revolutions of the wagon wheels. Thus, at a distance of about 25 miles west of Shell Creek was seen the first village, of skins, on the south side of the Loup[21] about 5 or 6 miles west of and across the river from the present city of Columbus. Four miles southwest of the old mission, just above the ford across the Loup, was the ruin of the old Skidi village of some two hundred lodges.[22] Accurate as the account generally is, Clayton, singularly enough, fails to mention the sizable Cedar Creek which falls into the Loup just above the site. The abandonment of this location, to which after 1846 had moved virtually all of the bands, came about as the result of its having been burned twice by the Sioux while the tribe was absent on hunts.[23] The encampment on the lower Loup represented the greater portion of the homeless and discouraged residents of this village. After fording the Loup the party continued on up its right bank, and Clayton records two ruined Indian villages seen on the high north bank, one at 10, the other at 17, miles above the ford.[24] Though on the opposite side of the river, he described the tumble-down lodges, the directions

[17] At the village visited by Dodge, Wharton, et al.—i. e., opposite Clarks.
[18] Ibid., p. 663.
[19] Ibid., p. 671.
[20] Ibid., pp. 685 ff.
[21] 1921, pp. 84–87.
[22] Ibid., p. 95 ff.
[23] Ibid., p. 95.
[24] Ibid., p. 106.

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175 131 of the entrances, and the indications of former cultivated fields as plainly visible. That these two ruins were those of the Horse Creek and Cottonwood sites, which Dunbar found inhabited in 1836 and which were apparently not abandoned until 1842, there can be no reasonable doubt.

Father De Smet in 1847 [25] recorded the Pawnee Nation as divided into four tribes, with their villages on the Platte, or Nebraska, River, and its branches, approximately 150 miles from the Missouri. His best contribution on the tribe is a graphic account of the Morning-Star human sacrifice of the Skidi.[26]

In 1851 Gottlieb Oehler and David Smith, two Moravian missionaries, made a hurried trip to the villages of the Pawnee, now but two in number, and both on the south side of the Platte. The lower village was located on a high bluff overlooking the valley 10 or 15 miles above the mouth of the Elkhorn,[27] probably at the site about 8 miles due south of Fremont. Twenty-five miles upstream, but on the valley bottom, was the other village, generally identified with the later site at Linwood. The traditional arrangement of the villages of the bands,[28] whereby the Skidi were always farthest toward the west, was apparently disregarded here, as the information, though rather vague, suggests that the Skidi were at the lower, or easternmost, site.[29] General Thayer, who held a council with the Pawnee at this village in 1855, locates it "on the south and west side of the Platte River on a very high point a few miles this side (south) of where the town of Fremont had just commenced a settlement."[30] A granite monument now marks the spot where Thayer's council was convened, on the edge of a high bluff overlooking the Platte bottoms.

175 648 Increasing friction between white settlers and the discontented Pawnee led to the treaty of Table Creek in 1857, whereby the tribe gave up the claim to lands lying north of the Platte and was assigned to a reservation 30 miles long by 15 wide, lying along both sides of the Loup.[31] Some difficulty was experienced in persuading the Pawnee to return to this region, but they finally did so with the understanding that the Government was to provide protection against the Dakota. Two villages, or what really amounted to one large scattering village, were established about a mile and a half south of Genoa, on a broad flat plain between Beaver Creek and the Loup River. Three of the bands settled in one village, on ground now occupied by the Genoa Cemetery; the Skidi were about a half mile farther west.

[25] 1905, vol. III, p. 974.
[26] Ibid., pp. 976–988.
[27] 1851, pp. 25–27.
[28] Dunbar, J. B., 1880, a, p. 257.
[29] Oehler and Smith, 1851, pp. 21, 25.
[30] 1907, p. 121.
[31] Royce, 1899, p. 818.

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The promised protection was soon withdrawn, however, and by 1860 the Pawnee were again suffering from the harassment of their relentless foes, the Dakota.[22] In addition, the encroachments of the whites from the east and south led to endless bickering and ill feeling between the two races. In 1870 a party of Republican Pawnee visited the Wichita Reservation in Indian Territory, meeting with a kindly reception, and on their return north agitation was begun within the tribe as well as from without for removal to the Territory. A crushing defeat by Teton and Oglala Dakota, while a portion of the Pawnee Tribe was engaged in their last buffalo hunt near what is now Trenton, in southwestern Nebraska, almost unnerved the remainder of the Pawnee, and in 1876, by common consent, the reservation was exchanged for lands in Indian Territory. The southward trek had actually begun nearly 2 years earlier, so that by late 1874 or 1875 the movement was practically consummated. The former reservation became Nance County, Nebr., and the once powerful Pawnee had passed forever from the territory they had for centuries known as their own.

ARCHEOLOGY

Historic Village Sites

Ancient village sites, almost always attributed locally to the Pawnee, are to be found on virtually every stream of any consequence in eastern and southern Nebraska. These remains are especially numerous along the north bank of the Loup below St. Paul, on the Platte between Prairie Island and Ashland, and on the Republican throughout its entire length in Nebraska, including also a short stretch of the latter stream in northern Kansas. Within historic times the permanent villages of the Pawnee were located in the lower Loup and Platte Valleys and on the Republican both north and south of the Kansas-Nebraska line, so that in all probability many of the so-called "Pawnee sites" in the area will ultimately prove to be correctly designated. However, in view of the fact that archeology here is still in the nascent stage, with little or no material from the vast majority of such sites, it is absurd to label as Pawnee all Indian remains found in the region. The specific tribal name should be applied only to sites known by documentary references or through careful archeological investigation to have been occupied by the Pawnee; any other sites should be differently and distinctively designated.

The characteristic form of habitation of the Pawnee when in their permanent villages was the earth lodge, of which a detailed description will be given later. Here it may be pointed out that the lodge

[22] Gillis, 1886, pp. 93–96.

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consisted of a main framework of timbers and posts, supporting a thatch of grass and, finally, a covering of turf, erected over a shallow, circular, saucerlike excavation; the entrance projected from one side, usually but not always the southeast or east. When such a structure was abandoned and the continual vigilance required for its upkeep removed, the outer shell of earth was soon washed off and deposited about the base of the wall, while the timbers might remain standing for years before rotting away. Thus, there would result in course of time a raised ring of soil, indicating the periphery of the erstwhile lodge; within this ring was a depression somewhat lower than the normal ground surface outside. Prior to the breaking up of the bottom lands along the rivers these lodge circles were to be seen on every Pawnee site of the past century. Where subterranean caches or "Indian cellars" occur the soil within them has often settled to such an extent that the mouth is revealed as a small circular depression. These occur both inside and outside the lodge circles. Defensive walls were constructed around nearly every historic village, but with few exceptions these have now been wholly obliterated. Long cultivation obviously tends to destroy all traces of either lodge circles or earthworks, though very shallow depressions and slight elevations may persist for a number of years. Frequently, even after repeated plowing, the sites of the lodges are still clearly indicated by sherds, charred wood, burned earth, bones, and similar detrital material, which litters each particular spot formerly occupied by a dwelling. The contrast between these circular discolored areas and the surrounding natural soil is especially marked after the site has been freshly plowed.

In the following discussion 13 Pawnee sites, grouped according to their band affiliations, will be briefly described. Ten of these have been identified with villages recorded by the various American explorers after 1800. Another, the Kansas Monument site, probably dates just prior to that year and, while not specifically documented, is unquestionably of rather late historic date. The other two sites were occupied approximately contemporaneously, and are post-Columbian; they have, however, never been placed with any degree of accuracy in the historical scheme, hence are designated as protohistoric.[25]

[25] In conformity to the system of nomenclature suggested at the first Plains Archeological Conference held at Vermillion, S. Dak., on Aug. 31–Sept. 1, 1931, village sites in the Pawnee area have been tentatively divided into three sequential groups, viz, the historic, the protohistoric, and the prehistoric. Historic sites are those which have been quite definitely identified with villages visited or reported by American and European explorers in the late eighteenth and early nineteenth centuries—i. e., between 1775 and 1874. Protohistoric sites are those dating from the very beginning of the European conquest; they show traces of trade relations with white men, bear strong basic cultural resemblances to the historic villages, but were never specifically documented; and in point of time they fall between the years 1540 and 1775. Prehistoric

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With the exception of the Cottonwood Creek village, all of these sites, where definitely located, have been visited by the writer, who was accompanied in all but two instances by Mr. A. T. Hill, of Hastings. Several of the locations were first identified by Mr. Hill many years ago, and through the medium of sample collections he has acquired a first-hand acquaintance with each site that made his assistance invaluable. So far as systematic excavation is concerned, Mr. Hill's activities have been largely confined to the Hill site. The Nebraska Archeological Survey, of which the writer was a member, spent the first 2 weeks in August 1930 in intensive work at the same place, the results of which are included in this paper. Excavations by the Survey at the Burkett and Schuyler sites in 1931 were made subsequent to the writing of this paper. However, certain of these findings have been incorporated here, although the main results await future publication. The only other extended excavations were made by E. E. Blackman, of the Nebraska Historical Society, at the Burkett site, in 1907. For the rest, as already stated, the sites have been visited and their chief features noted, as well as surface collections of specimens wherever available.

SKIDI PAWNEE SITES

The Skidi band, known in early literature as the *Panimaha*, is by some considered to have been the first to occupy the northern habitat. According to their own claim, they were formerly a very powerful and numerous tribe, consisting of four bands, each numbering 5,000 souls.[34] This number is doubtless excessive, but to quote Grinnell, "There are yet to be seen on the Loup Fork, in Nebraska, innumerable remains of Skidi villages, some of which are very ancient."[35] To date only three sites have been definitely shown to be Skidi, although there is a very strong probability that archeology will bring to light many more of prehistoric age, possibly substantiating the greater antiquity of the Skidi in the area.[36]

PALMER SITE.—This was discovered by Mr. A. T. Hill, of Hastings, in 1922, and has been identified by him as the probable site of the Skidi village reported by Major Sibley in 1811,[37] and subsequently

sites are those exhibiting only the pure native cultural traits with no traces whatever of Caucasian contact; they antedate the arrival of the Spanish in 1541. In the above discussion only historic and protohistoric Pawnee sites are considered. Various sites in the last category are discussed in Smithsonian Misc. Colls., vol. 93, no. 10, by W. D. Strong, entitled "An Introduction to Nebraska Archeology"; also in Wedel, 1935, pp. 132–237.

[34] Grinnell, 1893, p. 236.

[35] Ibid., p. 239.

[36] All of the sites described are indicated on map 2 which shows their situation relative to the streams and river bluffs. The names are those in general use among local investigators; the numbers are for convenience in use of the map only.

[37] 1927, p. 203.

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visited by Long (1820),[38] Morse (1820),[39] Irving (1833),[40] and Dunbar (1836).[41] It is located 4 miles north and slightly more than a mile west of the town of Palmer, on the north side of the Loup River,[42] and occupies a high flat plain, or second bottoms, about 30 feet above and immediately overlooking the stream. The site has been under cultivation for many years, but along the edge of the bank next the river is an unbroken strip 30 yards wide by 200 long, containing 10 well-preserved lodge circles. The village covered a much larger area, however, extending some distance back from the river to include perhaps 15 acres or more.[43] Flints, arrowpoints (mostly triangular), bits of clamshell, bones, and potsherds are scattered over the area, while the plow brings to the surface bits of charcoal, lumps of wood ashes, burned stones and clay, iron hoes, axes, parts of guns, and various other vestiges of former occupation. Plowing also reveals the sites of many additional lodges, in the form of large circles of dark, discolored soil, permeated with detrital material. Two short gullies cut into the site from the bank of the river appear to have served a dual purpose, primarily perhaps as refuse dumps and secondarily as a convenient means of gaining access to the river's edge, the bank elsewhere being too abrupt for easy descent. The accumulation of rubbish in the west midden is reported to extend down to bedrock, with a depth of more than 5 feet. A deposit of such depth, occurring as it does in an area where middens are absent or ill-defined, not only indicates a long period of occupancy but promises interesting stratigraphic possibilities.

The lodge circles which have so far escaped destruction by the plow vary in diameter from 27 to 48 feet, approximately. The center varies from 1 to nearly 3 feet lower than the crest of the ring, which is in turn about a foot higher than the surface of the surrounding ground. Formerly there is said to have been a great circle over 200 feet across in the center of the site, but this has been obliterated. Scattered among these circles, and in one or two instances within them, are smaller depressions from 2 to 4 feet across, where the soil has settled within subterranean caches. From each circle is a raised extension roughly equal in length to the radius of the circle, indicating the position of the former entrance. Contrary to certain generalizations, these do not all face the east, nearly half being toward the west and most of the others to the southeast.

[38] 1823, vol. I, p. 354.
[39] 1822, p. 238.
[40] 1835, vol. II, p. 125.
[41] 1918, pp. 617–618.
[42] SE. ¼ sec. 12, T. 15 N., R. 9 W., in Howard County, Nebr.
[43] In 1820, according to Morse (op. cit.), the village contained 120 lodges; in 1836 Dunbar (op. cit.) found only 70.

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To the north of the village site, perhaps a half mile from the river, are three prominent hills, the summit of each being covered with burials. These have been repeatedly dug into by local "relic hunters" and much valuable material thoughtlessly destroyed in the quest for medals, pots, and the like. A county highway crosses the central hill, and nearly every widening of the road or deepening of the side ditches has resulted in the exposure of graves. At the time of the writer's visit to the site in 1930 Mr. A. T. Hill located in one of the ditches the grave of a young child. From this was taken a very well-preserved skeleton, a small complete vessel, and other articles, to be treated at length in another portion of this paper. Most of the burials found have been accompanied by glass beads, lead rings, and other objects indicative of white contact. However, pre-Caucasian graves should be diligently sought as the site appears to have been early historic and may strike back into the late prehistoric.

FULLERTON SITE.—This site, first settled by the Skidi in 1842[44] and abandoned by them in 1846 or soon thereafter because of Dakota raids,[45] is situated on the north bank of the Loup River, immediately below the mouth of the Cedar, about 2 miles east and a half mile north of the town of Fullerton.[46] It, too, occupies a bench some 30 feet high, with the river flowing immediately at the base. Clayton's description of the site, written in 1847 while the Mormon emigrants were crossing the Loup at this point, sums up the situation very nicely:

> This village is situated on the north bank of the Loup Fork of the Nebraska or Platte River, about 4 miles southwest of the mission station on Plumb Creek [now Council Creek] and 138 miles from Winter Quarters [at Florence, Nebr.] . . . . On the east and west of the village is a beautiful level bench of prairie extending many miles, and to the ridge of bluffs which run east and west touching within a mile of the village [on the north]. On the top of the bluffs can be seen a number of Indian graves. To the northwest about a mile distant, and at the foot of the bluffs, is an extensive cornfield, the stalks still standing. On the south [i. e., across the Loup] is a beautiful view of the nice level prairie extending to the main branch of the Platte, the timber on the banks can be faintly, but plainly seen. . . . The village occupies a space of about 40 acres of land and is mostly enclosed by a ditch about 5 feet wide and a bank inside the ditch about 4 feet high, running from the bank of the river around the village till it again strikes the bank, and when perfect has formed a good fortification. A number of lodges are built outside the ditch on the east end on account of want of room inside when the bands from the other village joined them. The village is composed of about 200 houses or lodges [of which but one remained intact] . . . .[47]

[44] Dunbar, 1918, pp. 648, 654.
[45] Clayton, 1921, p. 95.
[46] NE. ¼ sec. 7, T. 16 N., R. 8 W., in Nance County, Nebr.
[47] 1921, pp. 96–97.

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*172 Most of the site has long been under cultivation, and there are but few remaining traces of the lodge circles; no evidence whatever exists of the surrounding wall. Bits of shell, bone, stones, flints, and some sherds are found, together with iron hoes, gun parts, knives, and other evidences of white trade. Plowing reveals the presence of many otherwise undiscernible house sites. The shortness of occupancy of the village precludes probability of much material remaining on the house floors. However, a systematic search of caches and graves, if such could be found, might be more profitably pursued.

*172 361 After the abandonment of the Fullerton village the Skidi appear to have wandered slowly down the Loup. For a time they resided on the south bank of that stream, on an unidentified location about 5 or 6 miles west of the present town of Columbus. Since this village consisted largely of skin lodges,[48] it is hardly probable that it will ever be definitely located; it may not have been occupied more than a few months.

[191] At any rate, by 1851 the band was established on the south bank of the Platte, about 10 miles above the mouth of the Elkhorn River at the McClaine site.[49] They were still here in 1855,[50] and probably did not leave until their final removal to the reservation on the Loup.

McCLAINE SITE.—This, the spot where Oehler and Smith in 1851 and Thayer in 1855 visited the Skidi, lies 3 miles south of Fremont, on the southwest bank of the Platte.[51] It occupies some 30 or 40 acres on a high, commanding cliff. It was formerly enclosed by a sod wall, or rampart, but this has long since been obliterated along with surface signs of lodges. A road skirts the edge of the bluff, cutting through a house site and several caches. One of the latter was opened by the writer in the fall of 1930, and from it were taken a few sherds, a scissors blade, the tooth of a horse, and a badly rusted triangular file. The house site showed little of interest in the cursory examination accorded it; it had obviously burned down, and the floor was remarkably destitute of artifacts. Material remains are scarce over the entire site, and but seldom consist of objects of genuine aboriginal cast.

Five miles downstream, to the southeast, is the Leshara site,[52] which is probably nothing more than an overflow from the village at the McClaine site. Early settlers state that groups of earth lodges were formerly scattered over the whole length of valley between the two, making a single, straggling community.

[48] Clayton, 1921, pp. 83–87.
[49] Oehler and Smith, 1851, p. 25.
[50] Thayer, 1907, p. 121.
[51] SE¼ of NE¼ sec. 2, T. 16 N., R. 8 E., Saunders County, Nebr.
[52] Blackman, 1903, p. 296.

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GENOA SITE.—After the treaty of 1857 the Pawnee gradually became concentrated in one great, rambling village on the Loup. This lay about 1½ miles south of Genoa, on a broad, flat plain between Beaver Creek and the Loup.[83] The Skidi occupied the western part of the village; the other three bands located in what is now the Genoa Cemetery. A sod wall protected the settlement on the south and west sides, with the portions nearest Genoa left open. Each band is said to have had its own burial ground. That of the Grands was to the south, across the Loup River. The Skidi interred their dead on bluffs northwest of their village. The Tappage Cemetery was on a hill in what is now the north edge of Genoa and that of the Republicans was northeast of the city. All traces of the village have been obliterated and the cemeteries have suffered extensively at the hands of vandals. Few objects of native production have been found, as the Pawnee were very much under the influence of the Americans at this late date and were rapidly losing their own arts and industries.

GRAND PAWNEE SITES

The Grand Pawnee are often designated in early literature and on maps prior to 1800 as *Panis*. The main villages of the band were always on the south bank of the Platte, save for a short period between 1806 and 1824 (the latter date being approximate), and another from 1860 to 1875. During both of these periods they were on the north bank of the Loup, at the Horse Creek and Genoa sites, respectively. Two pure Grand Pawnee locations are recognized, viz, the Linwood and the Clarks sites; the Plum Creek site was occupied by members of at least two of the other bands. The Horse Creek site was dominantly Republican, hence is included in that section.

LINWOOD SITE.—This site is located approximately a mile south and slightly west of the town of Linwood, on the east bank of Skull Creek 3 miles south of the Platte River.[84] It occupies the western portion of an alluvial flat, a small embaymentlike arm of the Platte Valley extending perhaps three-quarters of a mile up Skull Creek, and is inclosed on the west, south, and east by high bluffs. Skull Creek, at least in former times, probably carried water at all seasons of the year, and immediately below the site an excellent spring provided water sufficient to meet the domestic needs for a considerable community.

The site, though extending nearly half a mile continuously along the creek, actually consists of two contiguous sites of very different age. The early phase of occupation, designated on map 2 as 9 A,

[83] SW¼ sec. 24 and SE¼ sec. 23, T. 17 N., R. 4 W., Nance County, Nebr.
[84] SW¼ sec. 35, T. 17 N., R. 4 E., Butler County, Nebr.

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comprises the southwestern portion. It includes some 18 or 20 acres of ground, on a gently sloping tongue of land skirted on the west and north sides by the creek, and rising toward the south to a burial hill perhaps 200 yards distant. The larger part of this site has been farmed for years, but a small unbroken tract of pasture still contains a few lodge circles and caches. Near the center of the old village is a great circle, some 90 feet or more across, but quite shallow, perhaps the remains of an unroofed ceremonial lodge. Nearby and lying at right angles to the slope of the land are traces of a linear excavation upward of 50 yards long, strongly suggesting an artificially leveled gaming ground or race course. Little excavation has been done on this site, save for lamentable looting in the hilltop burial ground, but an extraordinarily fine collection of surface material has been made by Mr. Alfred Tichacek, owner of the farm, and additional specimens are to be found in abundance after each plowing. According to Mr. Tichacek, all of the material from this area is definitely pre-Caucasian, glass beads, metal, iron hoes, and other evidences of white contact being absent alike from the burials and from the village site, whereas pottery and stonework of probable Pawnee origin are very abundant.[*]

The late phase at the Linwood site (9 B on map 2) falls late within the historic period. The village at that time was on the flat immediately northeast of the older site and about 20 feet below the bench on which the latter stood. According to J. B. Tichacek, who homesteaded the land in 1871, "a sod wall nearly 3 feet high enclosed 40 acres which was thickly covered with lodge circles . . . the village contained over a thousand circles . . ."[**] Today all vestiges of lodges and wall have been obliterated, but pieces of cedar house posts, iron arrowpoints, hoes, gun parts, and the like are annually plowed out, while from the graves on the hills to the southeast come glass beads, metal ornaments, and kindred evidences of white contact. On the lower slope of the burial hill is another great raised circle of earth, similar to the one previously described from the early site, but with the north quadrant cut away by the road. Several short,

[*] Since the above was written the Nebraska Archaeological Survey has had the opportunity of excavating at this very promising site. The work included the uncovering of two lodge sites, one partially superimposed upon the other, but both of the usual historic Pawnee type and showing very little difference in age; the opening of one grave containing a flexed child burial; and considerable surface survey work over the area after heavy rains. Contrary to local expectations, however, some trade material was secured, including iron hoes and axes, fragments of a copper kettle, bits of brass, and glass. While there is probably a prehistoric or protohistoric phase of occupancy here, it would appear that the site was more or less continuously occupied, at least by small bands, throughout the later historic period. General conclusions reached as a result of the work were that the village was definitely of Pawnee origin, was very probably inhabited about the year 1800, and may date, in part, from a much earlier period. A full discussion of the investigations awaits a later report.

[**] Blackman, 1907, p. 329.

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inconspicuous linear tumuli may be seen some distance west of the circle. Nearby a deeply worn trail may be seen descending the burial hill in the direction of the village site; a similar trail is also discernible between the older cemetery and village about 200 yards farther west.

The later village here was doubtless the one visited by Oehler and Smith in 1851, while the locations given for the Grand Pawnee by Le Seuer, Collot, Du Lac, and Lewis and Clark also appear to fit the general locality. The scarcity of Caucasian material on the early site suggests that it was occupied during the latter part of the eighteenth and the early nineteenth centuries, and may have been the village visited or reported by these last-named explorers.

CLARKS SITE.—Three miles southeast of Clarks, on the right bank of the Platte, is the site occupied by the Grand Pawnee village from approximately 1820 to 1845.[87] At this point the river flows in a northeasterly direction, skirting the right-hand bluffs so closely that the second bottoms form only a narrow flat bench less than half a mile wide. About 3 miles below the site the line of bluffs swings abruptly to the east and the bottoms widen to 5 or 6 miles. To one approaching across these bottoms the angle of the bluffs gives very much the effect of a promontory or headland, which is readily seen from a distance of 10 miles or more.[88]

The site occupies some 30 acres or more, all at present under cultivation save for a 50-foot strip along the edge of the bench. Six or seven small house depressions, none over 30 feet across, and a dozen or so caches are the only visible remains, although charred house posts are not infrequently plowed out. Sherds, flints, and bone tools are singularly scarce, but iron hoes, gun parts, and other trade ware is rather plentiful. In the graves which cover the hilltops behind the site the same paucity of aboriginal material occurs, while glass beads, metal rings, and the like are correspondingly more numerous. Evidently the Pawnee here were already very strongly under the influence of the white man's culture and had abandoned many elements of their own.

The site was burned by the Delawares in 1832, during the absence of the Pawnee on their summer hunt, but was rebuilt by 1833, at the time of Irving's[89] visit. It was also visited by Major Wharton in 1844, who noted among other things the appearance of regularly posted sentries on some of the elevated points both above and below the village.[90] Inasmuch as the village was burned there is a possibility that careful search would reveal well-stocked caches in some of the

[87] SW¼ sec. 17, T. 14 N., R. 4 W., Polk County, Nebr.
[88] Wharton, 1844, p. 20.
[89] Irving, 1835, vol. II, p. 10.
[90] Wharton, 1844, p. 21.

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lodges. The burial grounds have been located to only a limited extent. However, the lateness of occupancy makes it seem improbable that the site would repay detailed investigation as it falls entirely within the historic period and presents few of the true native traits of the Pawnee.

PLUM CREEK SITE.—Approximately coincident with the establishment of the Skidi village at the mouth of the Cedar, as previously noted, the greater portion of the Grands, with the Republican and Tappage bands, jointly took up their residence 3 miles farther down the Loup, also on the north bank of the stream, and within a mile of the Presbyterian mission station on Plum Creek.[81] The spot where the mission formerly stood has been recently located on the west bank of the present Council Creek, perhaps 200 yards below the point where the latter leaves the bluffs. The Pawnee site has not been definitely determined, but since it was visible from the mission, and only a mile distant,[82] it would appear that the site is to be sought just north of the Union Pacific Railroad about 8 miles southwest of Genoa. There is here a slight bench, all under cultivation, on which the village was probably located. Since the site was occupied for but a few years it is doubtful whether there remains much village detritus. This, together with the very limited search that has been made, probably accounts for the uncertainty regarding its location, and also renders it unlikely that the site possesses much of real archeological value.

REPUBLICAN PAWNEE SITES

The Republican Pawnee, an offshoot of the Grands, first appear in literature in 1777 as one of the tribes receiving presents at the Spanish post of St. Louis.[83] Their habitat even at that early date was the Republican Valley, which they abandoned during the first decade of the nineteenth century for a more secure location with the Grands on the Platte and Loup Rivers.[84] It is extremely doubtful whether this band, as such, ever resided much farther south than the valley of the Republican, as its history is one of continual warfare with the hostile Kansa on the Kansas and lower Republican Rivers. After 1812 they were nearly always intimately associated with the parent band of Grand Pawnee, and during much of the time they occupied the same village. At least two and possibly three sites may be regarded as predominantly Republican Pawnee, although others were used from time to time in conjunction with other bands.

[81] Now known as "Council Creek," the names of the two streams having been reversed since that time. "The next stream west of the Beaver is Plum Creek, on which was the mission station."—Platt, E. G., 1892, p. 131.

[82] Dunbar, 1918, pp. 648, 656.

[83] Houck, 1909, vol. i, p. 142.

[84] Lewis and Clark, 1832, p. 709; Long, 1823, vol. i, p. 449.

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KANSAS MONUMENT SITE.—This site is located 1½ miles west and 1 mile south of Republic, Kans., on the south bank of the Republican River.[66] It derives its name from a granite shaft erected on the spot in 1901 by the State of Kansas "to mark the site of the Pawnee Republic, where Lieut. Zebulon M. Pike caused the Spanish flag to be lowered and the flag of the United States to be raised, September 29, 1806." The land has been set aside permanently as a State park.

The site occupies an area of less than 10 acres on a high promontory, about 200 yards from the river's edge. Midway between the river and the village site, in a deep gully, is a good spring; another formerly existed in a draw to the east. There are no hills near the site, since the village is situated on the bluffs themselves; the river sweeps by directly at the base of the declivity, there being no first bottoms. The site has never been broken, except a narrow strip along the south edge. Twenty-five lodge circles, from 8 to 15 paces in diameter, are scattered irregularly about. Some of them are nearly contiguous, but in most cases they are from 10 to 30 feet apart. They average 18 inches in depth, are well defined, and show clearly the position of the former entrances. Among the lodge circles are scattered caches, 15 or 18 of which are clearly discernible. Along the northwest site is an old rampart perhaps 150 yards long. One of the lodge circles occurs outside the wall, along with several caches. The burial ground appears to be some 200 yards northwest of the fortification wall, about the heads of some of the ravines.

Systematic investigation of this splendid site has never been undertaken, but many finds of surface material have been made. Sherds and quartzite scrapers of true Pawnee type occur, along with metal hoes, bridle bits, spurs, iron pots, and other evidence of commercial intercourse with white traders. The site is obviously historic and may be safely referred to the Republican band. That it is the site visited by Pike in 1806 seems highly improbable, as it tallies in no wise with the journals and map of the expedition. Lewis and Clark reported in 1802 that the Republicans had joined the Grands on the Platte, driven thither by the recurring attacks of the Kansa. Yet 2 years later Pike visited a village of 1,700 Republicans on the Republican River. By 1811 the entire band was on the Loup, at the Horse Creek site. Probably the Kansas Monument site was occupied contemporaneously with that visited by Pike, but being nearer the Kansa territory was subjected to more attacks, and hence was the first abandoned. The village seen by Pike was occupied for some years longer, but the expansion of the Kansa at last forced them to give up also and remove to the Loup. The abandonment of the site in Kansas would then antedate 1802.

[66] NE¼ sec. 3, T. 2 S., R. 5 W., Republic County, Kans.

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At present the entire site is under cultivation, which after more than forty years has obliterated all surface traces. Mr. George De Witt, who now farms the place, states that "when his father, who homesteaded the land in 1872, broke the land it was covered with lodge rings, fortification walls, caches, and the like. They gathered great numbers of stone mauls, axes, war clubs, and such like, threw them in the holes and plowed over them. . . . The land was literally covered with such relics of Indian life."[1] Subsequently, curio hunters have picked over the surface so thoroughly that the detritus usually found in abundance on old sites is comparatively scarce. However, every plowing reveals the presence of nearly a hundred lodge sites as discolored areas, and, as will be shown later, some of these well repay careful excavation. Caches are common and readily found, though usually these prove to be rather barren.

The cemeteries have been extensively worked by Mr. Hill and others, and in most cases they show clear evidences of white contact. Glass beads and metal work are common as mortuary offerings, and also in the ornamentation of clothing and the body. The discussion of specific features of the site will be deferred until a later section.

There can be little doubt that this was the Pawnee village visited by Pike in the summer of 1806; it coincides in every respect with both the descriptions in the journal and the map of the expedition. According to his map, Pike approached the village from the southeast, crossing en route the Smoky Hill, Grand and Little Saline, and Solomon Rivers. Since he erroneously represents both the Grand Saline and the Solomon as emptying into the Republican, it follows that he must have crossed them some distance above their mouths. Had the village been located at the Kansas Monument site the last 25 miles of the route would have lain immediately along the Republican itself, the Saline and Solomon Rivers would have been left far to the west, and Pike would have indicated them correctly as affluents of the Smoky Hill instead of as tributaries of the Republican. The village, furthermore, is located at a considerable distance above the point where the Republican swings toward the south, which is precisely the case at the Hill site; at the Kansas site, on the other hand, the eye can easily follow the tree-fringed course of the river for miles almost due south, a glaring inconsistency so far as the map is concerned.

As regards the site itself there are further substantiating factors. For example, the Kansas site is on top of the only "hills" within miles, the land to the south being flat and unbroken, whereas Lieutenant Wilkinson states that—

[1] Nebraska History Magazine, vol. x, no. 3, 1927, p. 163.

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There is unfortunately little or no information available on the Pawnee in Kansas, despite the fact that additional sites should be present on the Republican River, and probably also on the Blue.[66] Blackman [67] reports a site in Kansas about 3 miles south of Hardy, Nebr., which occupied an eminence about a mile from the Republican River, at "Big Spring"; lodge circles were visible here in 1860. Two miles to the west was another old ruin, not described.[68] According to J. B. Dunbar:

> In 1848 the remains of a considerable village were plainly discernible near where Wolf River empties into the Missouri in northeastern Kansas. The Iowas . . . assigned these remains . . . to the Pawnees.[69]

Efforts to verify this identification have been unsuccessful. In 1836 the Tappages pointed out to Mr. Dunbar some of their old villages on the Smoky Hill River in western Kansas.[70] Undoubtedly many other sites remain to be discovered and investigated in this area, and probably very significant early locations will also come to light as investigation progresses.

HILL SITE.—Seven miles east and 2 miles south of Red Cloud, on the south bank of the Republican River,[71] is the probable site of the Republican Pawnee village visited by Pike in 1806. Though known to local residents for many years, it was first identified by A. T. Hill in 1923. The land was subsequently purchased by Mr. Hill, through whose efforts a large collection of excellent material has been recovered from house sites, caches, and graves. Some two weeks were spent here in intensive excavation by the Nebraska Archaeological Survey in the summer of 1930.

The site occupies some 25 acres of flat, second-bottom land about 400 yards from the river. The first bottom, or flood plain, is perhaps 30 feet lower, beginning immediately at the north edge of the site, and may have been used for agricultural purposes. On either side of the site—that is, to the east and west—a small creek issues from the bluffs and pursues an uncertain, meandering course across the flats. An excellent spring immediately above the village formerly insured a steady supply of running water in the creek on the west side. Immediately south of the village site is a prominent hill more than 100 feet high, its summit utilized extensively for burial of the dead. Farther west are two more eminences which served a like purpose.

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[66] Hayden, 1872, p. 411.
[67] 1907, p. 349.
[68] Ibid., p. 350.
[69] 1880, a, p. 256. J. O. Dorsey, 1888, map 3, locates an Iowa site near the mouth of this same Wolf River. Compare Strong, 1935, p. 244.
[70] Ibid., p. 260.
[71] NW¼ sec. 13, T. 1 N., R. 10 W., Webster County, Nebr.

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*172 361 About midday we reached the summit of a lofty chain of ridges. . . . We moved on about a mile farther, and having gained the summit of a considerable hill, we discovered the village directly at its base."

This statement describes exactly the topography immediately to the south of the Hill site; the "considerable hill" is the principal burial hill previously described. The expedition established its camp "on the opposite bank of the Republican fork of the Kansas River, on a commanding hill",[74] but subsequently "moved down onto the prairie hill, about three-fourths of a mile nearer the village . . . upon a beautiful eminence, from whence we had a view of the town."[75] Directly across the river from the Hill site, about 1½ miles distant, is a high, bald hill, with a narrow, steep-sided tongue projecting toward the south. On this tongue or promontory, from which the Hill site is clearly visible, are nine small depressions, which it has been suggested were used as rifle pits by Pike's troops.

Graves on the central burial hill have yielded Spanish, English, and French medals, as well as buttons and gold braid from military uniforms. One Spanish medal dates 1797, bearing the likeness of Charles IV; an English medal, with the figure of George III, dates from 1762; an American medal is identical in type with those issued by the Government after 1801;[76] a military button bears the raised figure "1", the battalion number of Pike's infantry.[77] Taking all of these finds and others which cannot be mentioned here into consideration, and combining the archeological, historical, and geographic factors, one is forced to the conclusion that the Hill site is in all probability the scene of Pike's visit to the Pawnee in 1806.

HORSE CREEK SITE.—The Horse Creek site was discovered by Mr. E. E. Blackman in 1902 and was regarded by him as a Skidi site.[78] Actually, it appears to have been founded by the Grands and part of the Republicans about 1810,[79] to have been a pure Grand Pawnee site in 1820,[80] to have become a Republican site shortly after that date,[81] which it remained until its abandonment in 1842.[82] Clayton in 1847 speaks of "remains of an old village or Indian fort", 10 miles above the Fullerton village, referring doubtless to this site.[83]

[74] Pike, 1810, App. to pt. II, p. 22.
[75] Ibid., p. 23.
[76] Pike, 1810, p. 144.
[77] Nebraska History Magazine vol. X, no. 3, 1927, p. 187.
[78] Ibid., p. 166; Pike, 1810, p. 204.
[79] 1903, p. 297.
[80] Sibley, 1927, p. 202.
[81] Long, 1823, vol. I, p. 350.
[82] Irving, 1835, vol. II, p. 57.
[83] Dunbar, 1918, p. 648.
[84] 1921, p. 105.

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The site is located 9 miles southwest of Fullerton, on the north bank of the Loup immediately below the mouth of Horse Creek.[84] It occupies a high flat bench, at the base of which flows the river; the bluffs are nearly 2 miles distant, to the north. Upward of 40 acres are included in the site, all under cultivation save a small area at the east end. Near the mouth of Horse Creek, at the west edge of the site, five large shallow lodge depressions can be seen; others occur along a deep gully a short distance to the north. A quarter of a mile farther east are the remnants of a system of earthworks. On the edge of the bench is a rectangular enclosure 60 yards long by 25 yards wide, the long axis paralleling the stream; the side next the river appears to have been open. There is a large spring at the foot of the bench, about 30 feet lower than the enclosure, and separated from it by a steep declivity. Ten yards from the northwest corner of the same enclosure commences another low wall, running due north about 30 yards, then swinging slightly to the west for another 50 yards or more, where it ends abruptly. From near the southwest corner another wall runs 60 yards west by north, terminating at the edge of a broken field. Formerly this rampart is said to have continued in the same direction for several hundred yards, finally swinging back toward the south to form a defensive wall along the entire north side of the village. The lodge sites are scattered thickly over the entire area enclosed by the wall and the river, although surface traces have been almost entirely obliterated. The gully on the west, already mentioned, has cut through one house site, hence is apparently fairly recent, at least in its upper portion. On the small, uncultivated tongues of land projecting from the bench riverward are a number of caches; a few have been rifled. The burial ground has not been located, but skeletons have been uncovered just east of the site along the margins of several ravines, and also to the west on the banks of Horse Creek. The bluffs to the north might repay investigation also, though somewhat remote from the village.

Comparatively little digging has been done at this site, even by "relic" hunters, and there is still ample opportunity for securing valuable information by careful research. However, since the site is entirely historic, it will be necessary to locate the burials and house sites of the earlier period in order to obtain a view of Pawnee culture here prior to the predominance of white culture.

COTTONWOOD CREEK SITE.—This site is located on the north bank of the Loup River, 4 miles north and 2 miles east of Palmer.[85] It

[84] NW¼ sec. 3, T. 15 N., R. 7 W., Nance County, Nebr.
[85] NE¼ sec. 15, T. 18 N., R. 8 W., Nance County, Nebr.

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*172 was reported as a Republican village in 1820,[84] as Tappage in 1833,[87] and again as Republican in 1836;[88] it was abandoned about 1842,[89] 361 and was seen as a ruin by Clayton in 1847.[90]

The site is now practically obliterated and is very difficult to find. It lies on a low bench a short distance north of the river, just east of the mouth of Cottonwood Creek. According to J. F. Forbes,[91] who homesteaded in the vicinity in 1884, the remains of an old Indian village were plainly visible at that time and consisted of a sod wall enclosing some 50 lodge circles. In all, approximately 20 acres were covered by the site. Metal artifacts are quite common; sherds and stone objects rather less so. The location of the burial ground is uncertain, but it is probably either along the bank of the river or on the bluffs a mile to the north. The site has never received much attention, so far as actual excavation is concerned, hence it is impossible to say whether any worth-while material remains on the house floors or in the caches.

Four miles above the Clarks site on the bluffs east of the Platte there is a small pit, 10 or 12 feet across, representing either the site of a sentry outpost or an eagle trap. Perhaps 200 yards to the north a tongue projects from the line of bluffs; its summit has yielded a number of Indian burials. There is no trace of a village nearby, although the bottoms between the cemetery and the river provide an ideal location. Dunbar wrote in 1839 that the Republicans had mostly removed from the Loup Valley and had "settled on the south side of the Platte, a short distance above the village of the Grand Pawnees."[92] In 1844 Wharton, on his visit to the village of the Grands, reported "another of the Pawnee Republics a few miles above."[93] The lack of success that has attended every effort to locate the exact site must be attributed in large measure to the sandy, shifting nature of the soil at this point, which, combined with cultivation, has effectively removed all surface indications. Doubtless it was somewhere on the bottoms near the burial ground, as this is the general locality to which reference is made in the accounts cited.

Protohistoric Sites

*172 To this class are at present assigned two ruins in the Pawnee area which, while showing definite traits suggesting this tribe, cannot be historically identified with it. Both of these are unquestionably

[84] Long, 1823, vol. I, p. 440; Morse, 1822, p. 238.
[87] Irving, 1835, vol. II, p. 119.
[88] Dunbar, 1918, p. 617.
[89] Ibid., p. 648.
[90] 1921, p. 106.
[91] From an unpublished manuscript by A. M. Brooking.
[92] 1918, p. 627.
[93] 1844, p. 29.

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post-Columbian, as is indicated by the presence of iron and glass objects, but they are either very early or else were occupied during one or another of the periods when white exploration was at a low ebb, as for example prior to 1800. Other sites, definitely prehistoric, are far more numerous, but fall outside the scope of the present paper.

SCHUYLER SITE.—This is located 2 miles north of Schuyler and about half a mile south of Shell Creek.[84] It occupies a considerable area on a high promontory at the eastern extremity of the divide separating the Platte and Shell Creek Valleys. The main portion of the site lies immediately east of State highway 15, but sherd areas occur more or less continuously for nearly 2 miles along the north edge of the plateaulike divide overlooking Shell Creek. The highway cuts through several house sites and a considerable number of caches. Most of the caches have been pilfered by tourists and others, but examination of two that had escaped vandalism resulted in the recovery of a good collection of sherds. The floors of the house sites, now 12 to 20 inches underground, are likewise covered with fragments of broken pottery, and the fields nearby have been noted for some years as a prolific spot for "relics." Bits of copper and iron have been found in the fields on the surface and one small fragment of metal was taken from a house site. In general, however, Caucasian material is comparatively rare, and is very far surpassed quantitatively by good aboriginal artifacts. The burial ground has not been located, but it is probably either along the edge of the divide or on the higher bluffs a mile farther north.

The abundance of aboriginal remains on this site makes it appear likely that valuable data could be secured through careful excavation. The site antedates the early historic phase at Linwood, but designs on many of the sherds already show the tendencies which later became dominant and fixed. An excellent opportunity is thus afforded of tracing Pawnee relationships through this culture to some one of the prehistoric cultures of the area. Preliminary excavations have been made at the Schuyler site; there has been some superficial digging in the caches along the roadside. The best material apparently lies below the level reached by the plow, and so will be safe from destruction for some time to come.[85]

[84] SW¼ sec. 32, T. 18 N., R. 3 E., Colfax County, Nebr.

[85] According to tradition, the Omaha, at a time when horses were scarce, attacked a palisaded Pawnee village a half day's journey from Maple Creek.—Fletcher and La Flesche, 1911, p. 406. The Schuyler site is about 8 miles from Maple Creek, a fair half day's trip afoot, and may have been the village attacked. The Nebraska Archaeological Survey spent about 4 weeks in intensive excavation at this place in the summer of 1931. The results have not yet been thoroughly digested, but certain outstanding characteristics were noted, as follows: The village is large and loosely arranged, with no traces of defensive walls; houses are quite large, varying from 32 to 50 feet in diameter, with four central posts and an east entrance; a few burials in cache pits are flexed or

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BURKETT SITE.—This site is located 4 miles southwest of Genoa, on a lofty tableland a mile north of the Loup River.[86] It commands a magnificent view of some 50 miles of the Loup Valley, while 12 or 15 miles to the south may be seen the fringe of trees marking the course of the Platte. North of the site the land becomes more broken, finally giving way to the valley of the Beaver, 3 or 4 miles distant. On the east and south the land drops away irregularly to the Loup River bottoms, 150 feet below, with a ridge somewhat lower than the main tableland running generally east and west just south of the site. The Loup is at present the nearest source of water, but at the time of occupancy there were doubtless springs in some of the gullies immediately below the site on the south, as the river is too distant and the descent too rugged to have made it a practicable water supply.

The site, first recorded by Hayden,[87] consists of some 80 acres, thickly sprinkled with low mounds. In the summer of 1930, while the area was in corn, 20 mounds were counted, probably about a third of the number originally present. The largest are less than 2 feet in height, with a diameter of 50 to 60 feet; Blackman, in 1907, reported some of the mounds as 4 feet high and 100 feet across.[88] The surface of each of the larger mounds is thickly strewn with fragments of broken pottery, flints, animal bones, arrowpoints, and the like, and in many cases similar detrital areas undoubtedly mark the location of former mounds. On the northwestern part of the site are lower, often well-nigh invisible mounds, on whose surface there is much less material, and that consisting largely of pottery fragments.

With the exception of Blackman's limited excavations in 1907,[89] very little systematic work has been done in the site, but a few general statements can be made. The large mounds are to all appearances rubbish heaps, as the sherds, broken and discarded flints, cast-off bone awls, scapula digging tools, ornaments, small end scrapers,

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semifixed, with few or no mortuary offerings; the ceramic complex is very elaborate, with striking similarities to the Arikara-Mandan complex; the general level of the material culture is far above that of the historic Pawnee. A future report will deal with these points in more detail.

[86] SE¼ sec. 20, T. 17 N., R. 4 W., Nance County, Nebr.

[87] 1872, p. 412.

[88] 1907, p. 339.

[89] Ibid., pp. 339–344. The results of excavation at this site by the Nebraska Archaeological Survey in May 1931 were not available when the above was written. Three mounds excavated proved to be refuse heaps, while the one house uncovered was a round earth lodge suggesting early Pawnee origin. From evidence secured at this time an approximate date of 1600–1700 for the house was reached. Subsequently, in July of the same year, the Survey opened another house of similar type, with four central posts and an east entrance. Two additional mounds were examined, one of them very rich in sherds, but both obviously middens. Traces of sheet copper and very pale blue glass beads were secured, but no horse remains. Ceramically the site is very similar to that at Nebuyler, and the two are doubtlessly closely related both temporally and ethnically. A detailed discussion of this work must await a later publication.

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and similar artifacts are intermingled freely with lenses of ash, charcoal, and floor sweepings, to the very bottom of the mounds. No fireplaces have yet been found beneath any of the mounds, despite Blackman's statement that they "often show the hut ring well defined on the outer edge, with a slight elevation in the center, showing that but little refuse had been placed there."[1] It was his opinion that the mounds represented kitchen middens thrown up within older lodge rings, and he concluded that "The whole village must have been of grass houses or houses covered with skins and erected on the level, as the outer circle of earth is so small that it cannot represent more than a low banking around the base of the house."[2]

The small mounds on the west and northwest, where tested, are remarkably devoid internally of the usual débris, sherds and flints occurring but sparingly beneath the surface. One was trenched by Mr. Hill and the writer in the summer of 1930, revealing a few sherds and flint chips intermixed with disturbed soil to a depth of 12 inches; a few grains of charred corn and some elk teeth occurred also. At 12 inches a rather sharply defined, even line, with frequent lenses of ash and burned clay, appeared to mark the base of the mound. Below was clean gray soil, undisturbed. The ash lenses were not observed above the base line, in contrast to the composition of the larger refuse mounds. No traces of anything suggesting a fireplace were found, although the line alluded to closely resembled a floor. As the trench was only 1 foot wide and 6 feet long, and not through the center of the mound, a hearth, if such were present, could very easily have been missed. Some months later a small party from the Nebraska Archaeological Survey ran a narrow trench through a very low mound about 70 feet southwest of a rich midden and found a similar dark line at a depth of 10 inches; charred weed stalks, osiers, and grass were very abundant, covering the "floor" to a depth of 2 inches or more. A very few sherds were recovered, principally near the bottom. From these and other observations it appears unlikely that the lesser mounds were refuse dumps. Insufficient work has as yet been done in most of the site, but it may at least be suggested that some of the lower tumuli are house sites interspersed among the middens. Whether, as has been suggested, they indicate aeolian accumulations about the remains of fallen grass lodges, or are merely the remnants of poorly constructed earth lodges in a transitional phase, perhaps, from the grass house, is a speculation not as yet to be answered with finality. It may be stated, however, that as a rule the mounds do not mark the location of

[1] 1907, p. 343.
[2] Ibid., p. 344.

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*172 houses, and that these will probably have to be sought elsewhere between the mounds.

The site is one of the richest in Nebraska from the standpoint of material culture, rivaled only by the Schuyler site. During the past 40 years or more scores of small triangular arrowpoints, beautifully made, and seldom more than an inch and a half long have come from the surfaces of the mounds. Less common, but also very plentiful, are short planoconvex or small end scrapers, seldom found on historic Pawnee sites, and the so-called "Harahey" or four-edged flint knife. Far more common than even the stonework, however, is the pottery, which for excellence and variety is unsurpassed in the Pawnee area. The design motifs, though involving only a few basic elements, are extremely varied, with incised decoration on the body not uncommon. Among the historic Pawnee the potter's art had stagnated and become highly standardized as to type by 1800, but there is no suggestion of senile uniformity at this site. Complete vessels have never been found, but probably only await the discovery of the burial ground. More detailed treatment of the artifacts from this very significant site will be given later. The foregoing description serves to illustrate summarily an early culture in the area, of which the present-day Pawnee disclaim all knowledge.[3]

MATERIAL CULTURE

Any discussion of material culture which is based largely or entirely upon archeological material is obviously more or less one-sided. Of all the articles in daily use by a people there are always many which are by nature perishable, such as clothing, matting, basketry, and most objects of wood; all of these tend to decay readily when abandoned to the elements, and usually leave no traces. Especially is this the case when the villages were situated in the open in a climatic zone where aridity is conspicuously absent. Here the rains of summer and the melting snow of winter percolate slowly through the protecting mantle of soils and tend to obliterate and disintegrate all but the most imperishable of remains. Consequently there are left only objects of stone, bone, shell, and clay, with an occasional fragment of textile preserved by charring. These, then, are the traits which receive the major emphasis, and are the best known. Thus our data on these phases of Pawnee culture are sufficiently complete to give us a reasonably accurate basis from which to work back into the unknown prehistory of the tribe. But there exists, nevertheless, a great void in the picture which will perhaps never be

[3] Blackman, 1907, p. 344. According to Hayden, 1872, p. 411, no Pawnee Indian then living knew of the occupancy of this site, though an old chief, 30 years before, had told a missionary that his tribe dwelt there before his birth.

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entirely filled, for in the Pawnee area there are no caves or rock shelters where things of a perishable nature might have been preserved. A study of the large Pawnee ethnological collections in eastern museums will help in this regard but is outside the province of this report. 172*

In the present treatment the major portion of the data have been drawn from the Hill collection at the Hastings (Nebr.) Museum. The majority of the specimens were taken from the Hill site near Red Cloud. Small series from most of the other villages are also represented, furnishing valuable if limited comparative material. During the summer of 1930 the Nebraska Archaeological Survey secured a small, carefully excavated collection from the Hill site, corroborating for the most part the conclusions drawn from the larger collection. At Linwood the collection of surface material made by Mr. Alfred Tichacek at the early historic village site on his farm afforded a good representation from the early Pawnee culture on its eastern margin. The Nebraska Historical Society collections, where documented, were also of value. Wherever possible, the findings of archeology have been correlated with the accounts of early explorers so as to secure a final check on all material.

Habitations

The Pawnee, in common with other semisedentary tribes of the Missouri Valley and eastern plains area, used two and possibly three very distinct types of dwellings. In their permanent villages, occupied 4 or 5 months of each year, the familiar communal earth lodge was characteristic. Periodically, however, usually twice each year, the entire community abandoned the village to hunt bison, and at such times recourse was had to the skin tipi so typical of the nomadic tribes of the plains. Both types are superficially like those of neighboring tribes, but because of certain distinctive features in each it will be well to discuss them in some detail. A recent Pawnee earth lodge in Oklahoma appears in plate 1, *a*, while an idealized cross-section of such an earth lodge, with four center posts, appears in figure 1. In regard to the latter sketch it should be noted that the extreme outer (i. e., third) row of posts do not appear to have been driven into the ground, for in none of the following excavations were traces of them observed. 172* 342 [221]

Earth lodge.—Of the various early descriptions of the Pawnee earth lodge,[4] or *akkaros*,[5] that contained in Clayton's journal[6] is perhaps the most complete. It was written in 1847, among the

[4] Pike, 1810, App. to pt. II, p. 15; see also Bushnell, 1922, pp. 155–167.
[5] De Smet, 1905, vol. III, p. 974.
[6] Clayton, 1921, pp. 97–99.

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ruins of the Skidi village on the Loup at the mouth of the Cedar, and describes the only lodge left undamaged when the Dakota burned the village during the absence of the Pawnee on their summer hunt. Clayton wrote as follows:

In the first place, the earth is dug out a little, slanting to the depth of about 18 inches in the form of a perfect circle about 44 feet in diameter. This forms the floor of the dwelling. Then there are 17 crotch posts let into the floor in a direction slanting outward so that the top of the crotch is about perpendicular with the outside of the circle, the foot being set about 18 or 20 inches from the base of the circle. In the crotches poles are laid across from crotch to crotch, and are sufficiently high for the tallest man to stand upright under them. At the distance of 18 or 20 inches from the outside of the circle are many smaller poles let into the surface of the ground, on an average of about a foot apart and leaning inward so that the top of the poles rest on the cross-pieces which are supported by the crotches. The space between the foot of these poles and the edge of the circle forms a bench for seats entirely around

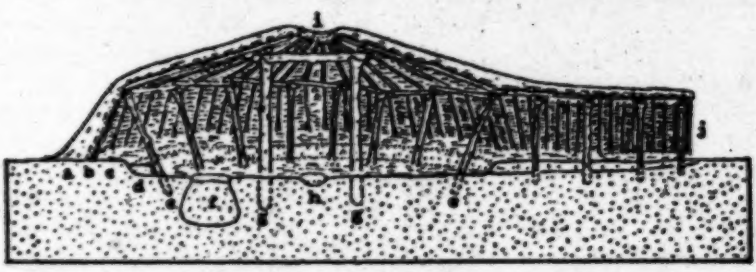

FIGURE 1.—Cross section of a Pawnee earth lodge, showing interior arrangement of posts and beams. a, Earth covering; b, grass, willows, and outer poles; c, edge of house pit; d, altar; e, secondary roof supports; f, cache pit; g, primary or central roof supports; h, firepit; i, smoke hole; j, entrance passage.

the house, and there is room sufficient for more than a hundred men to seat themselves on it very comfortably. On the outside of these last-mentioned poles are laid a number of still smaller poles horizontally from the bottom to top from about 9 inches to a foot apart. These are lashed fast to the upright poles by strings made of bark. On the outside of these is laid a thick layer of long prairie grass and occasionally lashed through to the upright poles also. The whole is then covered with earth about 2 feet in thickness at the bottom and gradually thinner toward the top. This forms an enclosure when completed around the whole area about 7 feet high, a place being left sufficiently large for the door. The next process is to place erect 10 upright poles or crotches, very stout, being about a foot in diameter, about 7 feet nearer the center of the circle than the first crotches. These are set perpendicular, deep in the ground and also arranged at about equal distances from each other, and form a strong foundation which is the design and use to which they are appropriated. On the top of these pillars are also horizontal poles laid strong and firm, the top of the pillars being about 11 or 12 feet above the floor. Long small poles are then laid from the outside horizontal poles over the inner ones and sufficiently long to meet at the top within about 2 feet of each other, forming a hole for the smoke from the fire to ascend through. These long poles are laid pretty close together all around the build-

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ing, and across them smaller ones are lashed with bark as in the first instance, only they are much closer together. The operation of lashing on a layer of long grass and finally covering the whole with earth completes the roof of the building. The door or entrance is a long porch formed by placing in the earth four upright posts or crotches far enough apart to extend outwards from the circle, about 18 or 20 feet. There are four upright crotches on each side of the porch and in the crotches poles are laid horizontally as in the other parts of the building. The process of lashing sticks across, then a thick coat of long grass, and lastly a stout coat of earth is the same as the other parts of the building. The roof of the porch is flat and is about 7 feet high and 6 feet wide. The porch is dug down about half as deep as the main building, making a short step at the mouth of the porch and another at the entrance into the house. The fire has been made in the center of the house directly under the hole in the roof. 172* 342

At the farther side of the building, exactly opposite the porch, is a projection of sod left about a foot from the outside of the circle which is said to have been the seat of the chief, and over which hung his medicine bag and other implements.

The crotches are arranged so that there is a free passage into the center of the hall from the porch, one standing on each side of the entrance about 6 feet apart and the others appear to be arranged from them. The smaller houses have not so many pillars as this one. Some have 8 in the center and 16 outside the circle. Others have 4 in the center and 10 outside. The entrances are also smaller in proportion, but all are constructed on the same principle. It looks a little singular to note that nearly all the entrances to these lodges front to the southeast, except in one or two instances where they front in other directions for lack of room. It is probable that this is done to avoid the effects of the severe cold northwest winds so prevalent in winter.

The interpretation placed by Clayton upon certain features inside the lodge as regards their function is, of course, open to question, as his experience with Indians in general and the Pawnee in particular amounted to virtually nothing. However, in the matter of structural details his description leaves little to be desired, being without doubt the best ever written by an eyewitness.

The best account of the arrangement of a lodge interior is that by Dunbar,[7] written in 1835, during his sojourn as a missionary at the Grand Pawnee village on the Clarks site. 172* 342 352

Within these buildings the earth is beat down hard and forms the floor. In the center a circular place is dug about 8 inches deep and 3 feet in diameter. This is the fireplace. The earth that is taken from it is spatted down around it and forms the hearth. Near the fireplace a stake is firmly fixed in the earth in an inclined position and serves all the purposes of a crane. Mats made of rushes are spread down round the fire on which they sit. Back next the walls are the sleeping apartments. A framework is raised about 2 feet from the floor; on this are placed small rods, interwoven with slips of elm bark. On these rods a rush mat is spread. At proper distances partitions are set up, composed of small willow rods interwoven with slips of bark. In front of these apartments, either a partition of willow rods is erected, or rush mats are hung up as curtains. But this is not always the case. In some lodges

[7] 1918, p. 600; see also Irving, 1835, vol. II, p. 85.

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the simple platform alone is to be seen without either partitions or curtains. In others there is not even the platform, and the inmates sleep on the ground. In these lodges several families frequently live together. I believe there are as many as three different families in the lodge where I stop. Each family has its particular portion of the dwelling, and the furniture of each is kept separate.

During the summer of 1930 a Pawnee lodge circle was completely excavated by the Nebraska Archaeological Survey party at the Hill site near Red Cloud. In measurements, interior arrangement of posts, and other details it coincided remarkably with the lodge described by Clayton, thus affording an interesting and unusual opportunity for comparison.

The lodge in which excavations were carried on was in the southeastern part of the village, lying at the base of a gentle slope which culminated in the principal burial hill 400 yards distant. When cleared it proved to be not quite circular in outline. It measured 46 feet from north to south by 44 feet 6 inches from east to west. The floor near the periphery lay 12 to 20 inches beneath the adjoining ground surface, deepest at the south side, and sloped very slightly toward the center. At the outer edge it curved sharply upward to form a vertical wall, or bench, as described by Clayton. The floor was somewhat rough, but generally well packed and hard, and like the vertical wall showed the effects of baking to a depth of nearly a half inch. No difficulty was experienced in tracing out the original excavation, once the cultivated topsoil had been removed.

Eighteen postholes were ranged about the periphery of the floor, 3 feet 6 inches inside the house wall. They were from 5 to 7 feet apart, i. e., far enough to permit an adult to lie at full length between them. Each was 6 to 8 inches in diameter, about 2 feet in depth, and slanted inward toward the bottom instead of descending vertically; the posts had very clearly leaned toward the edge of the pit. Two short sections of charred post were found on the south side, in situ;[8] otherwise, only decayed wood and light, loose dirt filled each hole.

Eight large postholes formed an inner circle about 8 or 10 feet inside the outer row. The distance from hole to hole averaged 7 feet, with two intervals of double length where posts were normally to be expected. Three additional posts were set triangularly within this circle, 15 feet apart. The posts in the central group were all much heavier than those in the outer circle, the holes averaging 10 to 12 inches in diameter, about 2 feet in depth, and descending

[8] This wood was submitted to Mr. E. W. Haury of Gila Pueblo, Globe, Ariz., for a comparison of the growth rings with those of trees in the pueblo area. The specimens proved, however, to be those "of some fast-growing tree whose seasonal rings (are) not strongly marked," and could not be correlated with the southwestern dendrochronology.—Personal communication from E. W. Haury, Jan. 16, 1931.

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vertically, indicating that the posts stood upright (pl. I, *b*; figs. 1, 2). 172* 312

Some difficulty was entailed in locating the doorway, even after a trench had been dug about the east, south, and west sides of the house in hopes of cutting through the passage. It was at first thought to lie near cache D, where 2 extra postholes occurred 5 feet apart and just outside the regular outer circle of posts. This

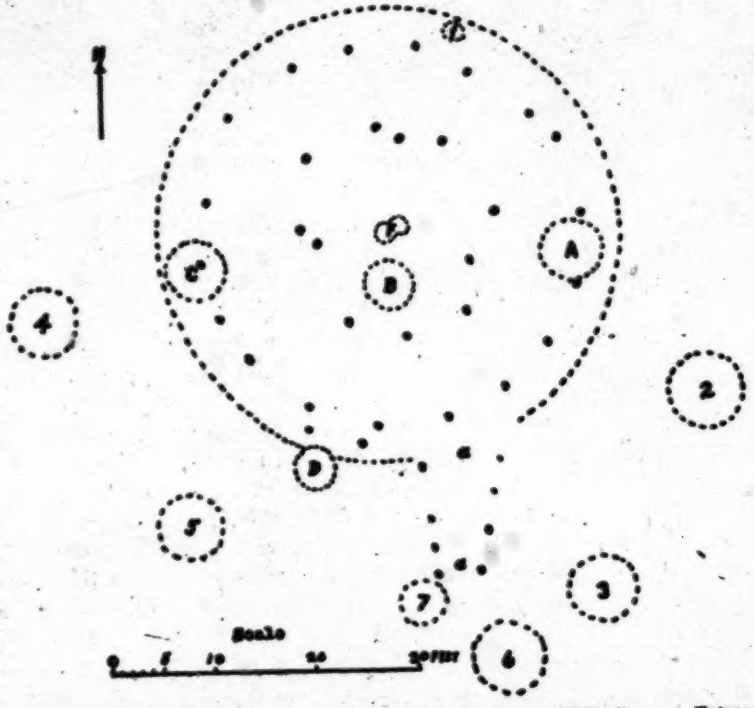

FIGURE 2.—Ground plan of historic Pawnee earth lodge, house 1, Hill site. *ea*, Entrance passage; *ABCD*, interior caches; *F*, main firepit; *f*, shrine firepit (?); 1-7, exterior caches; dots indicate postholes and broken line is edge of housepit.

anomalous configuration suggested strongly the reinforced inner end of the covered passageway, but the most persistent search failed to reveal any further traces in support of the hypothesis. As finally determined, the entrance was toward the south; it was 7 feet wide at the inner end, 4 feet at the outer, and could be traced for about 12 feet. On either side were 4 poles, from 3 to 6 inches in diameter. The floor was streaked with ashes and sweepings and was quite hard; it lay several inches beneath the surrounding ground surface.

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*172 354 The main fireplace lay just north of the center. It measured 4 feet by 2 feet, with the long axis northeast-southwest. Wood ashes to a depth of 3 or 4 inches still occupied the depression, while the brick-red fire-baked clay beneath was nearly 10 inches thick in places and almost as hard as rock. No traces were noted of the cooking crane beside the fireplace, as mentioned by Dunbar.

Eighteen feet to the north and slightly east was a second fireplace, lying between the outer row of postholes and the edge of the excavation. It measured approximately 12 inches in diameter and contained a 2-inch bed of ashes. Beneath the ashes was red, baked earth nearly 4 inches deep. From the size of the fireplace, as well as from its proximity to the inflammable wall of the lodge, it would appear that small fires only could be built therein; at the same time the depth to which baking had penetrated indicated the presence of many hot fires or else a fairly continuous one.

A point worthy of note arises in connection with the two fireplaces. A line drawn to bisect both hearths cuts the outer house wall just over cache D, and would constitute thus the diameter of the lodge. More significant still, it would be the midline for an entrance whose inner end fell at the peculiar arrangement of postholes previously mentioned, near cache D. The large central fireplace was probably for domestic purposes; the smaller may have been for ceremonial uses exclusively. The altar, referred to in Clayton's description as the "seat of the chief", was not noted, though the smaller fireplace appeared to be on a very slight rise in the floor. If the latter was actually the shrine hearth, as seems probable, then the possibility presents itself that the entrance may have originally been more toward the southwest in line with the fireplaces, or at least that such was the plan of the builders. Later, for some unknown reason, a new entrance was constructed. As will be seen from the ground plan, the doorway, as at last determined, in no way aligns with the two fireplaces, nor does it give unobstructed access to the central fireplace, as would the other situation.

*172 Four interior subfloor caches were opened. They were of the usual Pawnee type, bell-shaped, and for the most part were not especially rich. Cache A was 5 feet wide at the mouth, 6 feet across the floor, and 2 feet deep. Cache C was slightly more than 3 feet deep, approximately 4 feet across the top, and nearly 7 feet wide at the floor. Cache B was 5 feet wide and 2 feet deep; D was rather smaller. Sherds, animal bones, some flints, and a little iron work were taken from these, including one iron spear point, but for the most part they had been divested of everything valuable before final abandonment of the house.

Of interior furnishings and artifacts but little remained. Three feet west of the smaller fireplace a pocket was found beneath the

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floor next the wall; it contained 10 large unworked Unio shells. Six feet north of cache C, on the west side of the house, were uncovered the charred remains of a rush mat. Though in a rather fragmentary state, it measured nearly 3 feet long by 15 inches wide, and, as will be brought out presently, consisted of a sort of twined work. It lay on the floor between the outer row of postholes and the house wall, and in all probability once represented a part of the sleeping paraphernalia in one of the curtained-off compartments next the wall. The matting lay next to a row of 3 small holes, each about 3 inches in diameter and the same distance apart; 2 holes slightly larger lay about 4 feet and 6 feet, respectively, farther to the north, in line with the outer circle of postholes. Somewhat similar secondary poleholes were noted near cache D, always near the outer wall. Their purpose is unknown, though they may have served some end in connection with the sleeping platforms.

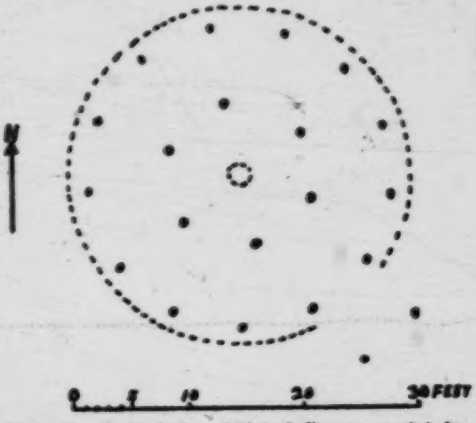

FIGURE 3.—Ground plan of historic Pawnee earth lodge, Hill site.

Nothing was found to indicate the situation of the family shrine, save for the second fireplace; even the altar, if present, was so obscure as to have passed unnoticed. Little else was to be expected, as the sacred character of the objects would render it extremely unlikely that they would have been left behind, with the possible exception of the ubiquitous bison skull.

Two earth lodge sites were excavated at this same village by Mr. A. T. Hill, prior to the work of the Survey. In general, they corroborated the ground plans and general findings of the later investigations, but appear to have been somewhat better laid out.

The first house (fig. 3) was 30 feet in diameter and its floor lay 16 inches below the ground surface. There were 13 posts in the outer circle, set at 7-foot intervals. The central group numbered 6 posts, also about 7 feet apart. All of the posts averaged from 6 to 10 inches in diameter and were sunken 12 to 15 inches into the floor. An 18-inch fireplace occupied the center, but no altar could be located. The doorway was to the southeast, and it will be noted that there were no posts between its inner end and the fireplace, to which access was

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readily had by one entering the lodge. Very few artifacts were found on the floor and no subfloor caches were located.

The second circle (fig. 4) was larger, measuring 36 feet in diameter and about 18 inches deep. The outer row of posts included 16; the inner group, 8. The fireplace, 30 inches across, was in the center, and to the northwest between the two circles of posts was a cache 4 feet 6 inches in diameter by 6 feet deep. The entrance was toward the southeast, and at its inner end may be seen a configuration of two extra posts strikingly similar to that found in the southwest portion of the house opened by the Survey. Exactly opposite the entrance, and in line with the fireplace and cache, was an earth platform or altar 13 inches high, occupying the full space between two posts. The posts were about 6 feet 6 inches apart, and from those of the inner to those of the outer row the distance was 10 feet. As in the other house, there were no posts between the door and the fireplace, so that from the end of the passageway to the altar at the rear wall there was a clear vista. Potsherds, bones, flints, burned charcoal, and some metal were found. The entire plans and laying out of the two circles were very nicely done and bespeak a rather high quality of architectural precision and symmetry.

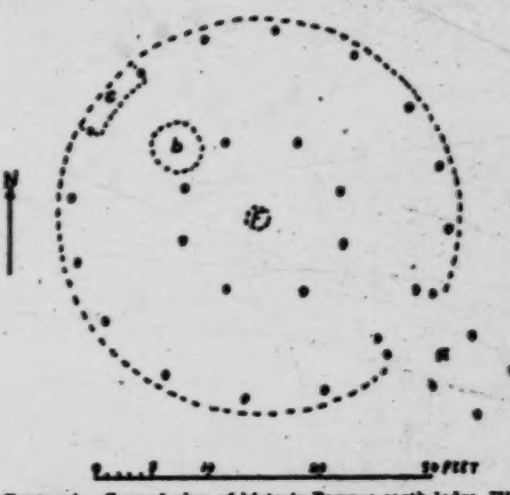

FIGURE 4.—Ground plan of historic Pawnee earth lodge, Hill site. *a*, Entrance passage; *b*, interior cache; *c*, raised platform altar; *F*, firepit.

TIPI; OTHER TYPES OF SHELTER.—According to Skidi traditions, the band dwelt originally in skin tipis,[9] later adopting the earth lodge. The tipi has been very well described by Dunbar.[10] It measured approximately 18 feet in diameter at the base. Three poles, 16 feet or more in length, were set up in tripodal fashion and lashed together near the top by a long cord. Other poles, to the number of 12 or 15, were then successively set up against the first three so as to form a circle; they too were fastened securely at the top by means of the

[9] Dorsey, G. A., 1904, p. 14.
[10] 1918, p. 603.

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cord. The cover, of thinly scraped translucent bison skins, was then tied to one end of a long pole, by means of which it was carried about and over the framework, and the two ends fastened together with pins or cord. A smoke vent was left at the top; it could be opened or closed at will by proper manipulation of the pole to which the cover was attached. The entrance, usually toward the east, was merely an opening at the bottom where the overlapping ends of the tent cover were left unfastened; it was about 3 feet high and could be closed by means of a bearskin flap. The furniture was piled against the back of the tipi; rush mats were spread over the floor; the fireplace and cooking crane occupied the center, immediately below the smoke vent. When the camp moved the tent poles were fastened together at one end across the horses' backs and permitted to trail behind the pack animals; sometimes they served secondarily the uses of the travois. The skin covers were commonly painted; they were used as pack covers during the travels of the village.

Murray, who accompanied the Pawnee on their hunt in the summer of 1835, describes a different type of summer shelter.[11] This was constructed as follows:

> They . . . arrange all their bales, saddles, etc., in a semicircular form, and pile them from 2 to 3 feet high. Around the exterior of these they drive into the ground 8 or 10 curved willow rods, from 2 to 3 feet distant from each other, but all firmly bound by leather thongs to four large, upright poles, that form the front of the lodge, and along which run transverse willow rods, to which the extremities of the curved ones are fastened. When the frame, or skeleton, is thus finished, they stretch the cover (made of buffalo hides, sewed together) tight over the whole, leaving an aperture for entrance and egress in the center of the front; and in fine weather, the whole front open.
>
> . . . the dimensions vary according to the number and wealth of the families residing therein; in some tents I have observed the front consisting of 6 or 8 upright poles to which were fixed more skins for additional shelter or shade. On the grass, in the interior, are spread mats, made by the squaws from reeds, and skins of buffalo or bear.

Each individual had his own particular portion of this shelter; the medicine bundle was suspended from the center, and in front of the door was a skin shield bearing the crest of the chief.

According to Dorsey,[12] the skin tipi and heraldic devices were used largely by the richer families, while the poor contented themselves with the dome-shaped brush shelter. The same authority mentions the use of a ramada-like drying platform and summer shelter, open at the sides and flat-roofed; it was used in connection with the earth lodge.

[11] Murray, 1839, pp. 199–200.
[12] 1904, p. 16.

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CACHES

*172 343 In common with most tribes of the central and northern Great Plains who depended to a greater or lesser degree upon the fruits of the chase, as well as upon the cultivation of maize, the Pawnee made very extensive use of the subterranean storage pit or cache. Every village was characterized by numbers of these structures, both between the earth lodges and inside them. They appear not to have been associated with the tipi settlements, nor were the Pawnee in the habit of caching the results of each day's hunting wherever night overtook them. Nevertheless the cache must be regarded as highly characteristic of Pawnee culture, particularly in connection with the food complex and the permanent village.

Eleven caches were opened by the Nebraska Archaeological Survey party at the Hill site in 1930. Four of these were indoors, beneath the floor of the lodge previously described. Six were found just outside about 15 feet from the outer edge of the floor, on the east, south, and west sides; they were discovered as a result of the trench dug about the house in search of the entrance. The eleventh cache was about 100 yards northeast of the house; its presence was revealed through the settling of the earth within and its consequent cracking away from the cache wall on all sides. These caches, though variable in size, nearly all conformed to the usual Pawnee type in other respects, hence may be taken as illustrative of the type at large.

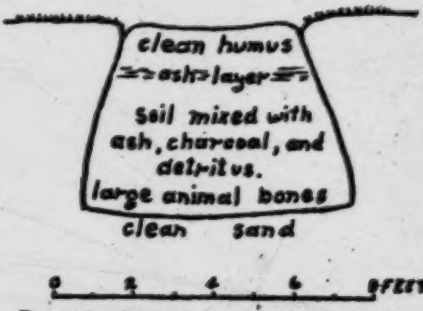

FIGURE 5.—Cross section of cache 1, Hill site.

Cache 1 (fig. 5), northeast of the lodge excavation, was the first to be cleared. The mouth was circular, with a diameter of 4 feet 7 inches. The sides had been undercut smoothly all around, so that the floor measured 6 feet 4 inches in diameter. The depth of the pit was 4 feet 6 inches. The floor was of clean white sand, covered with bark, and was depressed some 3 inches at the center. A collar of rich black soil, 4 inches wide and 8 inches thick, encircled the interior 15 inches below the mouth; its significance is not known.

The contents of the cache included little save discarded material. The soil was heavily impregnated with charcoal, ashes, and similar organic material. Animal bones, particularly those of the dog, horse, and bison, were abundant; the large leg joints of the latter were common in every cache opened. Iron and copper were present,

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mostly in small pieces; blue and white glass beads were scattered through the fill. Most of the bones were found on or near the floor, especially about the edges next the wall; very few of them were charred or showed any indications of having been cooked.

In general, the foregoing suffices to illustrate the average cache and its contents. There exist, of course, great individual variations, as for example, in size. Thus, cache 6 measured 5 feet across the mouth, slightly over 5 feet in depth, and 7 feet 4 inches across the bottom; cache 5 was 5 feet wide at the top, 4 feet 9 inches deep, and 7 feet in diameter at the bottom. Others have been reported of much greater size; one 11 feet in depth by nearly 10 feet across the bottom is said to have been opened in the early village site at Linwood. All are of the usual bell shape, however, with smooth, beaten walls curving evenly downward and outward from the mouth, and a slightly depressed, usually bark-covered, floor. Sand was present beneath the bark in at least four of the caches opened at the Hill site.

Smaller caches sometimes took a different form, especially if shallow. Thus, cache 3 was some 4 feet in diameter and 3 feet in depth, but was bowl-shaped; i. e., diminished in size toward the bottom. Cache B was 5 feet across and 2 feet deep, with almost vertical walls. Such small, shallow pits are, however, rather unusual, the majority resembling quite closely cache 1, as above described.

Cache 5 was of more than ordinary interest. At a depth of 3 feet was encountered a false floor, consisting of 6 or 8 inches of clean sand covered with bark. The space above contained large masses of what appeared to be corn meal. Beneath the false floor the soil was mixed with bones, ashes, and other detritus, but no artifacts. Bark covered the true floor also.

None of the caches were found to contain side pockets, as reported by Will and Spinden from the Mandan,[12] nor were any two of them ever found connected. The walls frequently showed the tool marks of the original excavators. They appear never to have been artificially hardened, as by burning of brush in them, though some were apparently beaten to a compact smoothness.

Most of the caches were not very prolific. Immediately below the zone reached by the plow a layer of fine wood ash was usually found, presumably as a protective measure against percolating dampness. Sherds, fragments of stonework, bits of metal, and above all, animal bones, were invariably scattered all through the fill. Occasionally, though, good artifacts were brought to light. Thus, in cache 2 were found a number of beaming tools made from bison ribs; from caches 3 and 4 were taken two well-made lance heads of iron;

[12] 1906, pp. 187–188.

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cache 7 yielded three excellent digging tools made from bison scapulae; and cache 5, as already indicated, contained corn meal or some similar ground cereal. Much richer pits are, of course, sometimes found. One opened by Mr. A. M. Brooking, of the Hastings Museum, in an old village east of Genoa, yielded 10 scapula digging tools, bone awls, 5 bone knives, 2 grooved hammers, 2 elkhorn shaft-straighteners, many large mollusk shells filled with yellow and red paint, and 13 small mollusk shells in matched pairs.[14] Such finds are, however, the exception rather than the rule, and many disappointingly sterile caches are encountered for every one that yields worth-while returns.

Normally the caches were used for the storage and concealment of surplus corn and household furniture, particularly during the periods when the tribe was absent from its villages on the seasonal bison hunts. When earth had been thrown in on top of the contents and the opening sodded over the location of the cache was perfectly hidden from any stranger. Generally they were emptied when the family permanently removed, and all usable articles were carried away. Occasionally the owner never returned to claim his goods, perhaps because of forgetfulness as to the exact location, death, or from some other cause; or attacks by hostiles compelled flight too precipitate to permit emptying of the caches. In such cases the investigator may be better rewarded with pottery, flint and bone tools, ornaments, foodstuffs, and the like.

Caches occasionally serve a secondary purpose as places of interment. In June 1843, when the Dakota raided the Pawnee village near the Plum Creek mission, with such disastrous results for the latter tribe,[15] the terrified survivors threw the bodies of the dead into the caches,[16] covered them hastily with earth, and then fled to their kindred, the Grand Pawnee, south of the Platte. Such a function was, of course, purely accidental and was wholly foreign to the original purpose which the structure was intended to serve.

EARTHWORKS

Walls of circumvallation were constructed about practically every Pawnee village of the nineteenth century. Sixty years ago, according to early settlers, these were still plainly to be seen on many of the old sites, but with cultivation they have shared the fate of other remains and become rare indeed. Leveling of these old fortification walls was one of the first steps in breaking the land; hence their obliteration has been woefully complete. In fact the only remaining

[14] Brooking, A. M., unpublished manuscript.

[15] Dunbar, 1918, p. 656. Occurrences similar to the above probably account for the "burials of Morning Star Sacrifice victims" occasionally reported in the press.

[16] Allis, 1887, p. 156.

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system of earthworks is that at the Horse Creek village, which was discussed in connection with that site. The rectangular enclosure may have been a horse corral, though that appears improbable. The entire arrangement of walls is such as to suggest a fairly elaborate system of defensive works, quite in keeping with the size of the village.

Palisaded walls were not used by the Pawnee, due probably to the scarcity of suitable timber.[17] The defenses consisted simply of an earth or sod embankment 3 or 4 feet high, immediately in front of which was a ditch 3 feet in depth and 5 feet or so wide.[18] The assailants were thus hampered in storming the wall by having to cross the moat in front of it; the defenders fought from the protection of the wall. How much actual good such defenses did it is difficult to say, as the Dakota, Kansa, and other hostiles contented themselves with sudden raids and horse-stealing forays, seldom if ever venturing to attack the Pawnee behind their breastworks.

The two great circles at the Linwood village are actually low earthworks, there being nothing to indicate that they were excavated. Each ring is about 90 feet in diameter; it is raised 8 inches or so above the surrounding ground surface and has a width of 2 feet or thereabouts. There is a gap in the east side of one, which appears also to have a small pit north of the center and a low mound just outside the gap. The purpose of these circles is obscure; probably they represent roofless ceremonial structures of some kind, perhaps for the Four-pole ceremony.[18a]

Two short parallel sections of wall may also be seen a short distance west of the easternmost of these big rings at Linwood. Each is 15 or 20 feet long, running north to south, and is but a few inches high.

There are no true temple, burial, or other artificial tumuli known in the Pawnee area.

Horse Corrals

The Pawnee in late historic times were heavily dependent upon the horse for transportation, particularly when on a hunt. Just how early they adopted the horse it is difficult to say. In 1682 La Salle wrote that the *Pana* purchased horses from the *Gattacka* and *Manrhoat*, who in turn obtained them from the Spanish settlements in New Mexico.[19] In 1719 La Harpe visited two *Pani* villages west of the Arkansas in the present State of Oklahoma and counted 300

[17] Cf. Fletcher and La Flesche, 1911, p. 408. This refers merely to a fortified village rather than to a true palisade.
[18] Clayton, 1921, p. 96.
[18a] Murie, 1914, p. 551 and fig. 2.
[19] Margry Papers, vol. II, p. 201.

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*172 231 175 horses in them.[20] La Salle possibly, and La Harpe probably, referred to the *Pawnee Picts*, or Wichita, rather than to the Pawnee proper. Bandelier, however, states that the Pawnee were well and unfavorably known to the Spanish through much of the seventeenth century,[21] and in all probability their raiding propensities had made them familiar with the horse quite as early as La Salle's time. At any rate, by 1800 every village on the Platte and Loup Rivers possessed several thousand animals, and their use had become an integral part of Pawnee culture.

*172 231 417 According to early accounts the horses were pastured during the day in great droves on the grassy bottoms and were tended by young boys. At night, as a precautionary measure against predatory Dakota raiders, they were brought into the village and placed in corrals among the lodges. According to Clayton,[22] there was a pen in conjunction with each lodge; they were constructed of small, closely set upright poles, bound together by crosspieces. Most of the enclosures were square, but a few were circular; the gate was merely a few poles laid across a gap on one side. Morse[23] states that there was a circular pen adjacent to each dwelling.

FIGURE 6.—Plan of horse corral (?), Hill site.

*172 417 Several years ago, during the course of excavations at the Hill site, Mr. A. T. Hill uncovered remains of a somewhat unique character (fig. 6). At a depth of 10 inches was encountered a very hard-packed stratum some 4 inches thick which was traced over an oblong area some 33 feet east to west by 21 feet in width. The edge was marked by a row of 15 postholes, normally 10 to 18 inches deep, about 7 feet apart, and each from 4 to 7 inches in diameter; bits of charred wood occurred at each hole and also between them. The east end was square; at the west end was a 12-foot gap where one

[20] Margry Papers, vol. II, p. 310.
[21] Bandelier, 1890, a, p. 185. Compare Thomas, 1935, pp. 172 and 277 (note 144).
[22] 1921, p. 100.
[23] 1822, p. 240.

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post had very obviously been omitted. There were no inside post-holes, nor was there any fireplace, and the usual debris found in a lodge site was conspicuously absent. The situation was low, unsuited for a dwelling, yet the hard-packed soil had effectively resisted the action of water draining into the hollow in times of heavy rain. There was quite clearly no roof, nor is there anything to suggest a house pit such as occurs as a foundation for every lodge. From all appearances, therefore, it would seem that the structure was a stock corral, with its entrance toward the west. Transverse poles were doubtless lashed from post to post, and the gate closed by means of movable cross poles. This reconstruction is confirmed by the occurrence of charcoal almost exclusively about or between the post holes. Such a corral, though unlike that described by Clayton, would be entirely practicable, and where timber was scarce would also be highly advisable.

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Foods: Agriculture

The food complex of the Pawnee centered about two staples, viz, maize and the bison. Since the two were very nearly equally stressed, though conducive to wholly dissimilar habits of life, they were directly responsible for many of the varied elements of Pawnee culture. Thus they made the people alternately roving hunters and settled agriculturists, and led, correspondingly, to the use of two entirely distinct house types, of the cache, and of numerous other traits. It was to this combination of hunting with horticultural life that much of the richness of Pawnee culture is due.

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The Pawnee were essentially a corn-growing people. Corn was their Mother; it figured in their rituals and in their mythology, even more prominently than did the bison. Two ears of corn went into the sacred bundles of the tribe, and were renewed annually.[24] The most important ceremonies, including the sacrifice of a maiden to the Morning Star by the Skidi, were directed as much toward securing a bountiful corn crop as toward success on the bison hunt.

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The cornfields were of necessity small, seldom including more than an acre or so. They were usually situated at the mouth of a ravine or in similar spots where the soil was loose and fertile. Owing to the primitive nature of the tools used, the prairie bottomlands with their heavy turf were impractical, consequently, the women were often compelled to go as far as 5 and 8 miles from the village to find a suitable plot of ground.[25] Occasionally the fields were protected by a wicker fence,[26] but as a rule they were left open, the women remaining to guard them during the daytime while the horses were at large.

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[24] Dorsey, G. A., 1904, p. 20; Linton, 1923, a, p. 2.
[25] Irving, 1835, vol. ii, p. 27; Oehler and Smith, 1851, p. 29.
[26] Long, 1823, vol. i, p. 447.

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the horses were at large. The corn was planted in hills and was cultivated by means of a hoe made from the scapula of bison; it was usually hoed twice each year. Artificial fertilizers seem to have been unknown, and irrigation was likewise never practiced.

According to Mrs. E. G. Platt, missionary to the tribe on the Loup, "corn known among all the Indians as Pawnee corn, was a great rarity to us, and its luxuriant growth a great marvel, ears 16 and 18 inches long being not uncommon."[87] Most of the charred cobs recovered by Mr. A. T. Hill from caches and graves at the Hill site are much smaller than this, seldom over 4 inches in length and not much thicker than a man's thumb; they exhibit usually from 8 to 12 or 14 rows of kernels. In general, where cobs have been taken from Pawnee sites, the smaller size seems to prevail to the exclusion of larger specimens. Charred kernels have also been recovered from graves at the Hill site; a few are shown in plate 2, *e*.

In addition to maize, the Pawnee cultivated beans, pumpkins, and squash.[88] Seeds of the latter have been recovered by excavation, and definitely identified. Beans have not yet been found and the varieties utilized are not positively known.

Corn was gathered while still green; it was then boiled, cut from the cob, dried, placed in leather bags, and stored in caches for future use. In times of prosperity it was cooked in bison fat. Pumpkins were cut into strips, dried in the sun, and then often woven into mats for convenient transportation.[89] When setting forth on their semi-annual hunt they took along "several sacks of sweet corn and beans, dry corn for mush, (and) dried pumpkins."[90]

Of uncultivated vegetal foods the wild potato appears to have been in most common use. These tubers grew plentifully in the sand of the Platte and Loup Valleys; they were dug up, boiled, peeled, dried, and cooked with dried pumpkins. They were usually taken along on the hunting trips. The wild potato, as such, is mentioned frequently but with what plant it is to be identified cannot be certainly stated. Long[91] says:

> We saw among them the Pomme blanche . . . which is the root of the *Psoralea esculenta*. It is eaten either boiled or roasted, and somewhat resembles the sweet potato.

Possibly, though not necessarily, this has reference to the wild potato of other writers.[92]

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[87] 1892, p. 129.
[88] Allis, 1887, p. 140.
[89] Long, 1823, vol. i, p. 447.
[90] Allis, 1887, p. 144.
[91] 1823, vol. i, p. 447.
[92] Allis, 1887, pp. 140, 144; Platt, Mrs. E. G., 1892, p. 129.

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Other important plant foods were the turkey pea, wild plum, wild cherry, Jerusalem artichoke, and the chokecherry. Of these all save the first have been found in the Hill site and have been definitely identified as to species. Others were probably used from time to time, but no record of them has survived, either archeological or documentary.

Eight species of plants have been found represented at the Hill site.[83]

Brauneria angustifolia or *Echinacea angustifolia*.
Wild plum (*Prunus americana*).
Flint corn (*Zea mays*).
Hackberry (*Celtis occidentalis*).
Chokecherry (*Prunus virginiana*).
Wild potato (*Apios tuberosa*).
Bush summer squash (*Cucurbita pepo melopepo*).
Chenopodium sp. (apparently *Chenopodium nuttalliae*).

To these we may add 10 species as given by Dunbar.[84]

Wild potato (*Ipomoea pandurata*).
Wild turnip (*Arisaema triphyllum*).
Pomme blanche (*Psoralea esculenta*).
Ground bean (*Apios tuberosa*).
Cucumber root (*Medeola virginica*).
Artichoke (*Helianthus doronicoides*).
Ground plum (*Astragalus caryocarpus*).
Umbels of milkweed (*Asclepias [illegible]rnati*).
Mushroom (sp. unidentified).
Sand cherry (sp. not given).

The complete report on botanical specimens from the Hill site, as identified by Dr. Gilmore, is as follows:

No. 1. Five small pieces of the root of *Brauneria angustifolia* (*Echinacea angustifolia*). The root of this was very highly esteemed by the Pawnee and other tribes within its range, for numerous medicinal uses, especially as a remedy for the bite of rattlesnakes.

No. 2. Four pits of wild plum (*Prunus americana*). The wild plum was highly valued for food use, and was eaten in considerable quantities fresh and uncooked, and was cooked for sauce. It was also preserved for winter use by drying.

No. 3. Six charred grains of flint corn.

No. 4. A number of pits of hackberry (*Celtis occidentalis*). The sugary fruits of hackberry were eaten from hand with pleasure by all, and especially by children. They were also reduced to pulp with a stone hammer, and the resulting paste was used as a flavoring in cooking meat.

No. 5. One pit of chokecherry (*Prunus virginiana*), and four small, spherical insect galls, apparently the galls which were common on the prairie rose (*Rosa pratincola*).

[83] From the Hill collection, Hastings (Nebr.) Museum. The specimens were identified by Dr. M. R. Gilmore of the University of Michigan. Letter of Apr. 10, 1931 (see also pl. 2, *a-c*).

[84] 1880, b, pp. 323–324.

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*172 824 [251] The chokecherry was greatly esteemed for food. It was cooked as a sauce while fresh, and also reduced to pulp with a stone hammer, and this paste was shaped into cakes and dried to preserve for winter use, somewhat in the manner of the dried prune paste of Bulgaria and Serbia.

The insect galls of the wild rose were supposed to possess medicinal value.

No. 6. Two tubers of *Apios tuberosa*. Apios tubers were highly valued as a food vegetable by tribes throughout the extensive range of this plant over all eastern North America. It was mentioned by Beverly and other writers of the English colony of Virginia, under the name "Openauk", which is a corruption of the name of the tubers in the language of one of the tribes of Algonkian stock in that region. Later, after the potato (*Solanum tuberosum*) had been introduced into North America, readers of these early writings erroneously construed them to refer to the potato. Hence arose the myth of potatoes having been grown by Indians of Virginia.

Peter Kalm, a Swedish botanist, in his visit to North America, mentions the common use of these tubers by the colonists of New Sweden (New Jersey) as they had learned from their Indian neighbors.

When the French Jesuit missionaries saw the Indians in New France (Quebec) harvesting these wild tubers they noticed their characteristic growth in long strings like a string of beads, hence they called them *les racines des chapelets*, "rosary roots."

When the potato (*Solanum tuberosum*) was first introduced to the people of the Dakota Nation, they compared them to the tubers of Apios, which was one of their important native food plants. The Dakota name of Apios, which is *blo*, was applied to the potato, and finally was completely transferred to it, so that now in common Dakota use the word *blo* signifies potato.

No. 7. A number of seeds of the Bush Summer Squash (*Cucurbita pepo* of the *melopepo* type). This type of cucurbit was of coextensive distribution with corn in the aboriginal agriculture of North America. In later prehistoric and historic cultures, many tribes possessed *Cucurbita maxima* (Winter Squash), *Cucurbita pepo* (Pumpkin) and *Cucurbita pepo melopepo* (Summer Squash), but in earlier prehistoric cultures *Cucurbita maxima* and *C. pepo* might be lacking, [while] it appears that *C. pepo melopepo* was not lacking in any cultures which possessed corn and beans.

No. 8. A small quantity of seeds of a chenopodiaceous plant, apparently *Chenopodium* sp. But these seeds are much larger than the seeds of any native Chenopodium of that region. The seeds of most species of chenopodiaceous plants indigenous in the region are 1 mm or less in diameter, but these are 3 mm in diameter. In the Journal of the Washington Academy of Science, volume VIII, no. 15, September 1918, W. E. Safford describes under the title "Chenopodium nuttaliae, a Food Plant of the Aztecs", a chenopodium which is cultivated in Mexico as a food grain. The seeds of our specimen more nearly agree with this description and illustrations of *Chenopodium nuttaliae* Safford, sp. nov., than with the seeds of any chenopodiaceous plant now growing in the region where these specimens were found. The puzzling and interesting question arises: How came these seeds here? Were they cultivated by the Pawnees at that time? Were they of direct importation from Mexico? [484] It is well known that the Pawnee made expeditions into Mexico in historic time, well on into the nineteenth century. Did they bring seeds of cultivated plants thence, and was this Aztec crop plant introduced by Pawnee farmers into their farming operations in Nebraska?

White men who traveled among the Pawnee have mentioned their cultivated crops, but only corn, beans, squashes, and pumpkins, those already familiar to these white men in their own homes. It may well be that here was another

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crop unknown to these white men and unnoticed by them. Even cultivated sunflowers, common as they were to Pawnee agriculture, were scarcely mentioned or not mentioned at all in accounts by these white men. Another crop, still less known to white men, might easily have escaped notice entirely. If they saw fields of it growing, they probably, not being acquainted with it, considered them to be old neglected fields "gone to weeds."

While maize and other vegetable products provided the bulk of the diet, animal food was also very generally used. Of particular importance was the bison, hunted not for its flesh alone, but also for the hide, hair, sinew, horns, and even the hoofs. Archeologically, the bones of this animal are by far the commonest in Pawnee sites, and byproducts, such as horn spoons and haircloth, are by no means unknown. Further, the dire straits into which the tribe was thrown by failure to find the herds shows very clearly how heavily the Pawnee leaned upon the bison economically, even with their fields of maize.

Two great tribal hunts were staged each year by the Pawnee, a practice followed also by the Otó, Omaha, Kansa, Osage, and other neighboring tribes of similar cultural status. Immediately after the second hoeing of the corn, which took place about the middle of June, the entire tribe departed on the summer hunt, returning in September to harvest the corn and other crops. Toward the end of October, after the corn had been cached, they set out on the winter hunt, the Skidi moving westward to the forks of the Platte, while the other bands proceeded southward to the Arkansas.[35] Early in April they returned to the permanent villages in time for the corn planting. The favorite hunting grounds lay in what is now western Kansas, between the Republican and Arkansas Rivers, necessitating a trek of from 400 to 900 miles on each hunt.[36] An additional incentive for the long winter hunt appears to have been the need of finding sufficient forage for the horses.[37]

The meat was eaten fresh whenever possible, every hunt being a period of heavy feasting. Great quantities of meat were cut into strips and dried in the sun to form "jerky." This was later eaten raw or else was cooked with corn and beans into a sort of stew or thick soup. The tongue and heart of the bison were usually sacrificed to the spirits. Long says that the tallow was also used, particularly in cookery. According to Allis,[38] "The most delicious dish with them is the young taken from the buffalo they kill."

Among the other animals commonly used as food, Allis[39] names elk, deer, bear, beaver, otter, raccoon, and badger. The jaws and

[35] Ashley and Smith, 1918, pp. 119–121.
[36] Dunbar, 1880, b, pp. 327–328.
[37] Long, 1823, vol. i, p. 447.
[38] 1887, p. 140.
[39] Ibid.

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*172 262 teeth of both elk and deer occur rather commonly in caches, as do those of beaver and badger. Dogs were sometimes eaten, though some of the canine teeth and maxillae found in excavation may be those of wolves or coyotes. Remains of small mammals, such as rabbit and squirrel, are fairly common. Fish appear to have been used but little, as their bones are seldom present in the refuse-filled caches.

The excavations of the Nebraska Archeological Survey at the Hill site yielded bones of the following animals, most of which were doubtless used for food:[40]

[825]

Dog (*Canis familiaris*).
Wildcat (*Lynx rufus.*)
Bison (*Bison bison*).
Pronghorn antelope (*Antilocapra americana*).
White-tail deer (*Odocoileus virginianus macrourus*).
Horse (*Equus caballus*).
Rodentia (sp. unidentified).

CERAMICS

*172 323 Singularly enough, in spite of the considerable amount of literature pertaining to the Pawnee, there is very little extant in regard to their pottery making. Dunbar[41] states that the women "made rude pottery of sand and a certain kind of clay, which after being burned was quite serviceable." According to information gathered by Comfort[42] from the old men, the Sisseton and Wahpeton Dakota secured their pottery from the Pawnee and Omaha. Yet none of the early explorers or missionaries, some of whom spent months and even years with the tribe and must have had ample opportunity to observe the trait, have left any detailed description of either the processes or the appearances of the completed wares.

Fortunately we have the account given by Grinnell which runs as follows:

> Years ago, on the sites of abandoned Pawnee villages, on the Loup Fork and on the Platte, fragments of pottery used to be found among the debris of the fallen lodges. The manufacture of this pottery was no doubt abandoned long ago, and has probably not been practiced to any considerable extent since they met the whites. A man about 50 years of age stated to me that he had never seen these pots in use, but that his grandmother had told him that in her days they made and used them. He said that they were accustomed to smooth off the end of a tree for a mold. A hot fire was then built, in which stones were roasted, which were afterward pounded into fine powder or sand. This pounded stone they mixed with fine clay, and when the material was of the proper consistency they smeared it over the rounded mold, which was perhaps first well greased with buffalo tallow. After the clay had been made of even thickness throughout, and

[40] For the identification of skeletal material the writer is indebted to Mr. Paul O. McGrew, of the Department of Paleontology, University of Nebraska.
[41] Dunbar, J. B., 1880, a, p. 279.
[42] 1873, p. 401.

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smooth on the outside, they took a small, sharp stone, and made marks on the outside to ornament it. When the material was sufficiently dry, they lifted it from the mold and burned it in the fire, and while it was baking, "put corn in the pot and stirred it about, and this made it hard as iron." This may mean that it gave the pot a glaze on the inside. In these pots they boiled food of all kinds. Mr. Dunbar informs me that these pots were also made in later times within a framework of willow twigs. The clay, made very stiff, was smeared on this frame, the inside being repeatedly smoothed with the moistened hand, and but little attention being given to the appearance of the outside. After they had been sun-dried, such pots were baked without removing the frame, which burned away in the fire, leaving the marks of the twigs visible on the outside of the pot."[a]

The above description of tempering and the use of grease and boiled corn fit in with the appearance of known Pawnee pottery. The use of a wooden mold seems more problematical, while Dunbar's statement concerning the use of a woven willow twig form stands by itself. So far, no traces of this last process have been observed on known Pawnee ceramics.

While the Pawnee were doubtless among the first of the tribes of the Missouri Valley to adopt the copper and iron vessels of the white man in preference to their own earthenware, yet the abundance of sherds on many of the historic sites indicates that the native products were manufactured until well into the last century.

Data for the present discussion of Pawnee pottery have been drawn very largely from the Hill collection at the Hastings (Nebr.) Museum. This collection includes 4 vessels, 2 complete and 2 restored (pl. 3), a large number of sherds from the Hill site, and sample series from nearly all identified Pawnee villages on the Loup River. The excellent sherd collection of Mr. Alfred Tichacek, from the early site at Linwood, was studied on two different occasions; it consists principally of pieces turned up in plowing, but is unmistakably Pawnee. A selected series of sherds was secured by the Nebraska Archaeological Survey during the excavations at the Hill site, in addition to a small, broken bowl. The large vessel, plate 4, *a*, is the property of the Nebraska Historical Society. Finally, a number of small private sherd collections, for the most part surface material from various sites, have been available; these have been checked wherever possible through personal observations at the villages concerned.

Save for the superiority of the art in early times, quantitatively as well as qualitatively, and its decline with recency, there is a general uniformity in all Pawnee ware that makes it impossible to distinguish the product of one band from that of another. Accordingly we shall treat the remains in their totality, and through a combina-

[a] Grinnell, 1893, pp. 255–256.

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*772 tion of all studied material from the various sites endeavor to determine the nature of Pawnee ceramics.

323 The two vessels from the Skidi site north of Palmer, shown in plate 3, *a* and *c*, are the only whole pieces of unquestionable Pawnee provenience yet found. The first, *a*, was dug out of the Loup River bank at the south edge of the village; it is 4½ inches high, 4⅞ inches across at the point of greatest diameter, and has an orifice 2½ inches wide. It is light brown or buff in color with fine hard paste and a partially smoothed surface finish. The walls are rather thin, but the rounded bottom is thickened sufficiently to make the piece return automatically to its proper upright position whenever it is laid on one side. The shoulder and the simple, direct neck are rather unusual in Pawnee pottery. Four vertically placed loop handles are luted to the vessel just beneath the lip; each has two vertical incisions, which give it a "three-finger" effect. Decoration consists of small indentations made by a blunt round tool held obliquely to the surface, this motif occurring on the lip and also just below it on the outside of the neck. A very crude and incomplete hatched design is incised into the upper body, just above the shoulder. Everything considered, it is one of the best of all Pawnee pieces, though it fails to illustrate certain of the fundamental diagnostics of the ware.

The second pot (pl. 3, *c*) was taken from the grave opened by Mr. A. T. Hill and the writer immediately north of the Palmer village (pl. 11, *d*). It stands 4½ inches high, is a trifle more in maximum diameter, and the mouth is 3 inches across. In color it is dark gray, with a clouded appearance. The paste is dark, moderately fine, with sand tempering, and the surface is rough, with very slight ridges running from rim to bottom. The body is globular, with a uniform curvature from rim to rim in cross section. The rim is vertical, and its lower edge is slightly thickened so as to overhang the body a very little; in width it measures about three-fourths of an inch. The lower edge of the rim is extended at regular intervals to form rather inconspicuous tabs, six in all. Only the rim is ornamented; the motif is simple, consisting of groups of parallel diagonally incised lines, those in each group being oblique to those of the next; the arrangement is based upon the position of the tabs, as will be obvious from a study of the illustration.

From the Hill site, occupied solely by the Republican Pawnee, come the two restored specimens in plate 3, *b* and *d*. The former is 3¾ inches in height, 2⅛ inches across the mouth, and has a diameter at the shoulder of 3¼ inches. It is a very dark gray, with fine paste sparingly tempered with small sand particles; the surface is somewhat uneven. The bottom, which is reconstructed, is flattened somewhat, and there is a sharp shoulder giving way to a constricted neck. The rim is about five-eighths of an inch wide,

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slightly concave, and has a sharp outward-curving lower edge. Actually the neck and rim proper are continuous, being broken only by the collar forming the lower edge of the rim. Incised lines apparently covered the rim and neck; they show no particular patterning.

The fourth vessel, shown as *d*, is also largely a restoration, but is not as open to doubt as is *b*. The original fragments were found in a house site; they include a portion of the rim and enough of the body to give a reasonably close approximation as to the correct curve of the lower part. The piece is 7 inches tall, 5 inches across the mouth, and the body reaches a maximum diameter of slightly over 6 inches. It is made of light buff finely ground clay with grit tempering; the surface is chalky to the touch but is not polished. The bottom is round, on the same curve as the body in general; there is a very slight incurve immediately below the rim. The rim is 2¼ inches wide, with the characteristic collarlike thickness at the lower edge. The decoration, consisting of triangles filled in with parallel lines in oblique groups, is an extremely common Pawnee motif; it occurs here on both rim and upper body. This form is quite common, to judge from sherd collections, though few of the fragments show any evidences of use in culinary pursuits.

Two other complete or nearly complete pots found in the heart of the Pawnee area are shown in plate 4; both are the property of the Nebraska Historical Society. The larger specimen, *a*, was dug up some 15 or 18 years ago on Prairie Creek near Archer, Nebr., and shows very nicely the outstanding characteristics of Pawnee ware. It stands 9 inches high, with a maximum diameter of 7¾ inches; the orifice is somewhat irregular, averaging 5 inches across. The body is not quite globular, having a subconical bottom that renders the vessel unstable when set on a flat surface; the neck is constricted. The paste is fine, dark gray in color, hard, and is tempered with angular bits of granite and sand. The surface is gray, clouded with black, and is well polished; the black areas are shiny, as though the result of firing after application of a grease coating. The walls are about one-fourth inch thick, increasing to one-half inch at the bottom. The rim is about 1½ inches wide, of the modified collar type, and bears the herringbone design. Four loop handles, each 1 inch wide, extend from the lower edge of the collar to the upper body; tabs, also four in number, alternate with them. Small indentations, averaging four to the inch, occur on the lip, which is square. On the shoulder and upper body is a 3½-inch zone of decoration, consisting of the ubiquitous triangle motif filled in with subparallel lines, those of each figure oblique to the next. The piece is well made and despite the uncertainty attending its discovery can hardly be anything else than Pawnee.

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*172 323 The other vessel, *b*, is rather more questionable. It was found in Cedar River, near Fullerton, having apparently been washed down the stream from a cave-in higher up. However, since there are Pawnee camps and old village sites for some distance up this river, the piece is tentatively assigned to that tribe. It is 5¾ inches high, 5⅞ inches in greatest diameter, and has a slightly flaring mouth 4 inches across. The body is very nicely shaped, having an even curvature from shoulder to shoulder, in profile; the bottom is round. The paste is gray, fine, and tempered with grit. The surface is irregular but well polished and very dark gray. The rim flares slightly outward; it is about three-fourths inch wide, and is decorated by a series of pinched-up nodes at ½-inch intervals along the lower edge. The lip is narrow but bears small diagonal incisions all around. The walls are unusually thin, averaging little more than one-eighth inch. There is no body ornamentation.

Technologically considered, Pawnee ceramics may be divided at present into two major wares, both presumably hand-molded from lumps of clay.[44] The more common type is characterized by a very fine, smooth, even-textured paste, which fractures saccharoidally, and is very slightly friable on a freshly broken face. In color it varies from light buff to very dark gray, the lighter tones probably the result of prolonged firing. Tempering is usually of fine sand, sparingly used, but crushed granite, fine white siliceous material, and possibly mica were also employed; ground shell appears to be uniformly absent. The ware is generally quite hard and does not tend to flake off readily.

Surfaces are usually rough, often ridged (paddle-marked?), but the irregularities have been somewhat subdued by rubbing while the clay was still moist; all are slightly gritty or chalky to the touch. Slip was never applied, nor is there any indication whatever of glazing; even a lustrous polish is rarely attained. Some of the sherds show tiny flecks of mica all over the surface; this feature appears to be particularly prominent in pottery from the earlier sites on the Loup River and is probably due primarily to environmental factors.

Shapes were few and simple. As illustrated by the whole vessels previously described, the most common was a small or medium sized globular pot, round bottomed, with a more or less constricted neck and a rather characteristic rim. Ladles, bowls, mugs, platters, and [415] high-necked forms do not appear, nor do there seem to have been many very large vessels. Sherd studies bear out these generalizations for practically all sites, but there is a possibility that some of the earlier villages may ultimately yield a somewhat greater variety in forms.

[44] Wissler, 1922, p. 69.

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A noteworthy diagnostic for this type of Pawnee ware is the collarlike rim. It varies in width from 1 to 3 inches, is nearly or quite vertical on the inside, and tends to increase gradually in thickness from the lip to its lower edge. The resultant effect is that of an overhanging collar (fig. 7, *a*). A modification of this type is shown in *b*; the rim is here of the same thickness as the body, but is slightly concave, and its lower edge is formed by a simple outward bending of the wall of the vessel. Occasionally the thickened lower edge of the rim is elaborated into tabs or protuberances, 4, 6, 8, or 12 in number (pl. 3, *c*). These are generally plain and unperforated, but where eight or more occur, alternate tabs are often extended downward to the body of the vessel to form broad loop handles (pl. 4, *a*). The simple, direct rim is also found, though not commonly in the class of ware here under discussion.

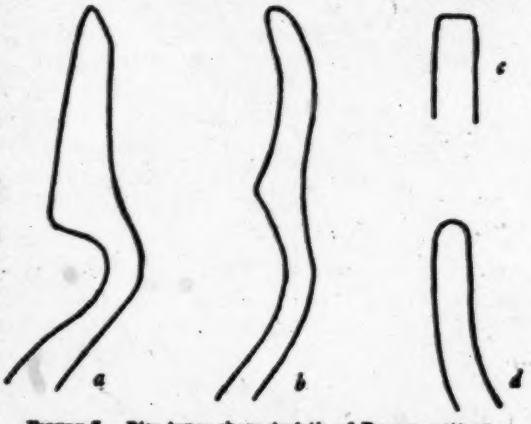

FIGURE 7.—Rim types characteristic of Pawnee pottery.

The distribution of this particular form of collared rim is of considerable interest and may be briefly mentioned at this point. It is found on sherds from early prehistoric cultures of the Republican Valley in southern Nebraska, but there the rims are seldom more than 1 or 1½ inches wide and bear a somewhat more varied style of ornamentation. It does not occur along the Missouri River in eastern Nebraska, is virtually unknown in Kansas, and is not mentioned as a trait of Mandan ceramics.[45] When we turn to the Iroquois area of New York and Pennsylvania, however, the characteristic Iroquoian rim is startingly similar to that of the Pawnee pieces.[46] The latter tribe, it is true, never made vessel mouths square in outline, whereas the former often did so. But in the matter of an overhanging, collar-like rim, thinnest at the lip and thickest at the lower edge, the two areas are virtually identical. Tabs are not infrequently found on Iroquois rims also.[47] Decoration shows further similarities, as will be evident presently. The parallels thus existent between Pawnee and Iroquois wares seem too close to be purely for-

[45] Will and Spinden, 1906, pp. 173–179 (see, however, pl. 39, *1*; also pl. 40, *e*).
[46] Holmes, 1903, p. 160; Parker, 1916, pp. 485–487; Skinner, 1921, pp. 85, 89; 141–170.
[47] Holmes, 1903, p. 160, pl. CXLIV, *d*.

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tuitous and may well be indicative of some sort of former cultural and geographic connection between the two complexes.

In the matter of decoration Pawnee pottery is characterized by great uniformity and simplicity. The patterns are generally applied to the face of the rim, less commonly to the upper body. All ornamentation is incised. The commonest motifs are basically triangular. A line is drawn diagonally across the rim from lip to collar and back to lip, entirely about the vessel, and the triangles thus formed are filled in with hachuring. The hatched lines in any group are usually parallel to one side of the triangle rather than to the lip; also they are oblique to those of the adjacent figures (fig. 8, *a*). A slight modification consists of a series of chevrons produced by filling in the triangles with V-shaped figures of progressive size (*b*). The herringbone design ranks second in abundance. It is usually applied con-

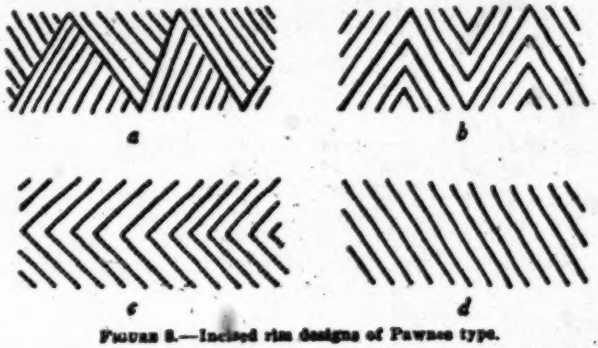

FIGURE 8.—Incised rim designs of Pawnee type.

tinuously around the rim, with the points toward the left in perhaps 75 percent of the sherds so ornamented. A third motif consists simply in diagonal parallel lines across the rim (*d*). All of these designs are used on the rim, but where body ornamentation occurs it is almost invariably in the hatched triangle pattern first described (fig. 8, *a*; pl. 3, *d*). The neatness and accuracy of the work varies greatly, but there is little modification of design (pls. 3–5). Cord marking has never yet been found on rims of Pawnee vessels, but nearly obliterated traces sometimes occur on the body.

Lips of vessels are very commonly ornamented, in addition to the rim proper. This involves the use of small indented elements repeated all about the lip, or if the latter be too sharp and narrow, of short diagonal incisions inside and just below the edge. This characteristic of small, repeated indentations closely set all along the lip is very common also on earlier wares of the Pawnee area, particularly along the Loup and Republican Rivers; but it is seldom found on the pottery of the Missouri Valley in eastern Nebraska.

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Parker, in describing rim decoration of the Iroquois of New York, says that the "collar is frequently decorated by a series of triangles within which have been drawn lines close together and parallel with one side of the triangle. These triangles contrast with one another as the parallel lines slant obliquely, either right or left, in the adjacent space."[48] Many of the vessels and rim sherds illustrated by Holmes[49] and Skinner[50] bear like or similar designs, sometimes made with cords but usually by simple incising. In Nebraska this motif appears also in earlier cultures west of the Missouri River, but is almost, if not quite, always associated with the collared rim. Curvilinear figures are absent alike in Iroquoian and Pawnee decorative art, and in keeping with the generally more simple character of their work the Pawnee never used the human face or figure as a part of their ornamentative products. But even allowing for the greater complexity and elaboration of Iroquoian pottery decoration, there is obviously a basic similarity in the most common motifs of the two groups that is highly suggestive, particularly in view of the likenesses in rim form noted above.

The second major type of Pawnee ware differs markedly from that just described and is in most respects much inferior to it. The paste apparently contains much iron and, according to the intensity of the firing process, varies in color from light yellowish gray to a bright orange-red. It is characteristically very finely ground, hard, and tends to fracture in flakes. Tempering is of very fine sand, so sparingly used that it can often be detected only with the aid of a good lens.

Surface finish is invariably very rough and poorly executed. The rubbing stone was never used, and as a result the walls of vessels are of very uneven thickness. Occasionally the fingerprints of the potter can be detected in the depressions. In thickness the walls vary from three-eighths inch up; those of the preceding type are seldom more than one-fourth or at most three-eighths inch thick. The ware tends to crack along the midline of the walls, as though the inner and outer surfaces have been expanded or contracted unequally. The tendency of these pieces to crack is so marked as to lead one to the conclusion that they were either not dried thoroughly before firing or else that the baking process was very improperly carried out.

The only vessel shape so far determined for this ware is a rather deep bowl, 4 or 5 inches in diameter, about 3 inches deep, and having a direct undecorated rim (fig. 7, *c*, *d*). No fragments of pots

[48] Parker, 1916, p. 486.
[49] Holmes, 1903, pl. CXLV, *a–d*, CXLIX, *f–g*; and figures.
[50] Skinner, 1921, pls. XII, XIII, XXVI, XXVIII–XXXII and figure 38.

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have yet been found, nor is there a single trace of the ornamental collared rim described for the preceding ware. (See Strong, 1935, pl. 1, A.)

The most interesting feature of this pottery is a thick, deep-red coloring matter with which the interiors of vessels are invariably covered; it is very rarely applied to the exterior also. This coating consists of red ocher, applied after the baking of the vessel, and in nearly all cases can be readily rubbed off. In this respect it resembles the "fugitive red" wash found on Late Basket Maker bowls of the southwestern United States.[51] It differs, however, from the latter in being much thicker and generally restricted to bowl interiors. A similar wash has been noted, but not very fully described, on some Mandan pottery from North and South Dakota.[52] It occurs also on earlier prehistoric wares of the Pawnee area, along with the collar type of rim, but is not found in eastern Nebraska save where Pawnee influences are recognizable. Apparently it increased in later historic times, as earlier sites have yielded a much smaller number of such sherds. This may be due to the lack of adequate research in the latter, however. Du Pratz found the Natchez coating their pottery with red ocher which caused it "to become red after the burning."[53] This refers to a slip rather than to an impermanent wash, and apparently represents a different technique from that followed by the historic Pawnee.[54]

Aside from the interior application of ocher, little effort was made to decorate this pottery. Paddle marking, where applied to the body, was usually so carelessly done as to have little artistic value. Incised and modeled ornamentation were not employed. The vessels may have been purely ceremonial in purpose, perhaps serving primarily as receptacles for small articles; possibly they were used for mixing paint.

The Pawnee ceramicists seldom extended their efforts beyond the realm of utilitarian pot-making. Very few figurines are found, though one or two crude representations of horses or other quadrupeds have been picked up at the Hill site by Mr. A. T. Hill. Disk beads, made by grinding sherds to a circular shape and then piercing them, have been found at the Schuyler and Burkett sites, but nowhere else; they obviously are no indication of the potter's skill. Thickened perforated circular objects, resembling spindle whorls and especially made, are not uncommon near St. Paul on the Loup, but there is nothing to indicate that they were of Pawnee origin. Modeled clay pipes have not yet been found in the historic Pawnee sites of the region; judging from the occurrence of stone pipes

[51] Roberts, 1929, pp. 110–111.
[52] Will and Spinden, 1906, p. 174.
[53] Du Pratz, 1758, vol. i, p. 124.
[54] 1920, p. 166.

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in various prehistoric sites, stone was apparently used from very early times. This is the more remarkable in view of the fact that along the Missouri River in eastern Nebraska clay pipes of curved and elbow type are the rule. The Mandans also used pottery pipes in addition to those of stone.[66]

The foregoing résumé of Pawnee pottery, though in its finer details based almost entirely upon collections from the Hill and Linwood sites, is substantiated by the sherds available from the other historic villages. Careful research may yet develop local differences, although the fact that Pawnee pottery making was generally on the decline precludes the probability of any very radical variations within the tribe during the historic period. However, certain of the early sites show a far more varied and elaborate ceramic complex than that just treated, hence merit a few generalizations at this point.

Considered from the standpoint of ceramic excellence at large, the Burkett site stands foremost in the Pawnee area and probably in Nebraska generally. As was noted in the description of the site, sherds are by far the most abundant remains, in spite of the fact that "relic" hunters have made it a favorite hunting ground for many years. As early as 1867 Hayden commented upon the great quantities of pottery fragments and stonework here, assigning them to the early Pawnee.[66] Thirty years later sherds collected from this site by Hayden were described and illustrated by Holmes, who mentions them as coming from "a Pawnee village site on Beaver Creek, Nebr."[67]

The paste of this pottery is usually gray. It is not infrequently fired to a light brown on the surfaces, and in some of the better pieces it is light tan throughout. It is rather sparingly tempered with sand, or in a few instances with crushed granite. Dark firing clouds may be noted on many of the pieces. Surface finish is but little superior to that of the better grade of Pawnee ware. However, on some of the lighter sherds may be noted a pseudoslip. This appears to have been produced by rubbing the vessel while the clay was still quite moist, thus bringing the finer particles to the surface and securing a smooth, nicely polished finish. This pseudoslip is usually tan or reddish brown in color, very seldom black. Occasionally vessel interiors are painted with impermanent red ochre, similar to that found in later Pawnee pieces.

No unbroken vessels have yet been recovered from this site. To judge from the sherds the prevalent form appears to have been a globular pot of rather small to medium size, with a direct or narrow

[66] Will and Spinden, 1906, p. 118.
[66] 1872, p. 412.
[67] 1903, pp. 199–200, pl. CLXXVII.

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collared rim and very often with several loop handles at regular intervals about the neck.[88] The last feature is much more pronounced than in the case of historic Pawnee pottery and is strongly reminiscent of pots from western Tennessee and Arkansas,[89] and to a somewhat lesser degree of the Missouri River wares of eastern Nebraska.

An analysis of 191 rim sherds collected from this site by the writer and others of the Nebraska Archaeological Survey yielded the following results. Of the total of 191 rims, 133 were plain and direct, with little or no thickening and no decoration on the rim proper; 93 of these, however, were ornamented on the lip by means of small diagonal indentations, minutely incised herringbone or other motifs, or with impressions made by holding a blunt instrument oblique with the surface. In a few instances this decoration extended down inside the vessel for one-fourth to three-fourths inch. Incised rims numbered 36, all but 4 of which bore lip decoration similar to that above described. Thickening of the rim to produce a collar effect occurred on 23 pieces, but less than half of these were anywhere near as pronounced as the Pawnee type; all bore incised decoration and only two showed no lip incisions. Loop handles or traces of them were found on 20 fragments, or slightly more than 10 percent of the total. Practically all of the latter, however, were ornamented, whereas the typical Pawnee handle is plain.

A series of selected rim sherds from this site is shown in plate 6, all but four of them with handles; a similar group, with nearly identical sherds, is illustrated by Holmes.[90] While representing the better class of wares rather than the more numerous, these show all of the common design motifs as well as the types of handles. Certain of the designs are nearly identical with the typical Pawnee motifs of historic times (pl. 6, *b*, *h*, *j*, *l*; cf. pl. 5), whereas others remind one of prehistoric cultures of the Republican Valley of southern Nebraska (pl. 6, *k*, *p*, *q*, *r*); all bear indentations about the lip. A very limited amount of relief work also occurs (pl. 6, *d*, *j*).

Body ornamentation appears to have been more common than on Pawnee vessels. Paddle marks, very often partially obliterated, are rather common; incised linear motifs are likewise abundant. There are a few traces of curvilinear and circular elements, as well as sug-

[88] See Holmes, 1903, p. 199. In the light of specimens recovered by the Nebraska Archaeological Survey from this site, it may be pointed out that Holmes' reconstruction of vessel forms is remarkably accurate. Several restorable pots are characterized by small or large globular bodies, narrow necks, and two or more loop handles in opposed series about the mouth. Fragments of a multiple-necked, flat-bodied vessel of canteen form were also found.

[89] Holmes, 1903, pl. XII; Harrington, 1920, pls. LXI–LXIII.

[90] 1903, pl. CLXXVII.

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gestions of the "fern frond", all of which are absent from historic wares of the region. The most common patterns consist simply of groups of parallel lines and strokes surrounded by other similar groups, triangular or otherwise, in which the units are at a different angle. Always, however, the work is very tastefully executed, and most of the decorated pieces are very attractive.

Holmes also figures a roughly made pottery pipestem from this site.[81] Such objects are relatively unusual, however, and in spite of their skill in pottery making the aboriginal occupants seem to have done very little along other lines of ceramic endeavor.

The Schuyler site, apparently a connecting link between the well-known historic Pawnee culture and that of the Burkett type, is nowhere very well represented ceramically.[82] From the specimens available in small surface collections, however, it is possible to give at least the major facts relative to it.

The paste of this ware is usually gray, sometimes lighter on the surfaces. It is quite fine, hard, and is tempered with crushed granite or sand. The surface is rather rough, but as in the case of the Burkett ware, the necks, handles, and other conspicuous parts have often been especially smoothed to receive the decoration. In a few pieces a good degree of smoothness is attained, but it very seldom equals the pseudoslip of earlier types.

Vessel shapes are not known, but probably did not differ greatly from the preceding. Globular handled pots are the only pieces of which traces have so far been found.

A selected series of 194 potsherds, all collected from the surface of the site, yielded the following results upon analysis. Rim fragments numbered 117, body pieces 77, and whole or fragmentary handles 24. Of the 117 rim sherds, 53 (45 percent) were simple and direct in form with no decoration on the rim proper, but 37 of these in turn bore finely incised and indented lip ornamentation. Rims bearing regular patterns numbered 24, all but 2 with decorated lips; in two instances the patterns extended nearly an inch down the inside of the rim. Collar rims, foreshadowing the later Pawnee type, occurred in 20 specimens; they were mostly rather narrow and all were incised. Loop handles were present on 24 of the rim pieces, or 20 percent. Of the total number of rim pieces, 79 (68 percent) show lip designs. The motifs are quite similar to those from the Burkett site, but show a slightly more pronounced similarity to Pawnee ware.

Body decoration is also present. Of the 77 more or less selected body sherds available, 40 are plain and undecorated, 29 are incised,

[81] Op. cit., p. 199.

[82] As previously noted, large collections were subsequently made here during the University of Nebraska Archaeological Survey excavations of 1931.

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6 are paddle marked, and 2 bear a heavy coating of red ochre on the interior. The patterns are simple and for the most part not to be distinguished from those of the Burkett ware, save perhaps in their greater simplicity. Curvilinear elements have not yet been found. This, together with the presence of ochre pigment on some of the pieces, is reminiscent of Pawnee ware.

Circular objects made by grinding down sherds to a disk shape and then perforating them are found at the Schuyler site. They vary in diameter from five-eighths to 1½ inches and probably represent beads, gaming disks, or ornaments; they are too small and light to have served as spindle whorls. None of the later historic Pawnee sites has yet yielded similar specimens.

To summarize: Pawnee pottery in historic times was often crude and unfinished, suggesting ceramic decadence. The earlier sites, however, show a progressive increase in complexity and variety of wares in inverse ratio to the amount of Caucasian influence to be noted in each. Thus, the Schuyler site, where only traces of Caucasian contact have been found, surpasses the later historic sites in the grade of pottery encountered, while the still earlier but also protohistoric Burkett site excels both in this regard. Reasons have already been given for regarding both of the above sites as closely related to the Pawnee culture of historic times. Logically one might expect a decline in ceramic activity following the acquisition of the horse and the impetus thus given to a more wandering hunting life. The introduction of metal utensils would have the same effect, and the observed decadence of historic Pawnee pottery is in line with this conclusion.

More surprising is the resemblance noted between the ceramic art of the Pawnee and that of the Iroquois of New York. So striking is this resemblance in matters of rim form and designs that some sort of a basic relation between these two historically isolated groups is suggested. The prehistoric Pawnee-like cultures in south central Nebraska show these same tendencies and an interesting possibility of earlier southeastern connections between the two peoples is thus indicated. The pottery of the prehistoric rectangular earth lodges along the Missouri River in eastern Nebraska, however, is quite different from that of the Pawnee and shows little resemblance to any known Iroquoian ware.

Work in Stone[62]

Manos and metates.— Metates are very uncommon at any of the Pawnee sites, though rectangular manos are sometimes found. A

[62] Based largely upon the Hill collection, Hastings (Nebr.) Museum, and information supplied by Mr. A. T. Hill.

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slab of dark sandstone 3 inches thick, 11 inches long, and 9 inches wide, shaped like a horseshoe with one square edge, was taken from a cache at the Hill site; the surfaces are well-worn and slightly hollowed, apparently as a result of much grinding. A smaller, somewhat similar specimen is from the Skidi site near Palmer. Manos are rectangular in form, resembling quite closely those found in the pueblo area of the Southwest. 172* 412

The scarcity of metates at Pawnee villages is rather remarkable as they are abundant in central and northeastern Kansas and occur in prehistoric cultures of the Republican Valley in southern Nebraska. Those from Kansas are often very large and deeply worn, whereas the Republican Valley specimens are smaller and flat.

ANVIL STONES.—These are very common everywhere in the historic Pawnee villages. They are irregular bowlders of granite, quartzite, or other tough crystalline rock up to 10 pounds in weight. One or two faces are usually cupped, sometimes as much as half an inch, and give clear indication of having been subjected to much abrasion. Occasionally discarded mauls and hammerstones were similarly treated.

The abundance of anvil stones, as contrasted to the scarcity of metates, suggests that the Pawnee may have pulverized dried meat, seeds, and berries by pounding rather than by grinding. In such a case the anvil stone was probably set in a sort of rawhide "pannier" and the food substance placed on it to be crushed with a stone-headed pounder. This was the method followed by the Dakota, who in some instances at least used anvils almost identical to those of the Pawnee.

ARROWPOINTS.—On the more recent sites arrowpoints are not common. Notched points are typical; they vary up to 2 inches in length, are rather slender, made usually of reddish-brown or brown chert, and in rare instances have a notch in the base. An unusually fine point from a grave at the Hill site is made of translucent white quartzite; it is 2½ inches long, 1 inch wide at the base, which is concave, and has a single pair of notches. It is thin and well made and may have been used as a talisman or for some similar nonutilitarian purpose. 172* 411

Triangular unnotched points appear to be the rule at the earlier sites. They are seldom more than 1¼ inches long or more than five-eighths of an inch wide, quite thin, and are generally of good workmanship; the material is gray or brown chert. This type exclusively is found at the Burkett site; it predominates in the early phase at Linwood and at Schuyler, is fairly plentiful at the Palmer site, but becomes comparatively scarce at other historic Pawnee villages. It also occurs plentifully in protohistoric villages in Rice,

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McPherson, and Harvey Counties, Kans., and along the Kansas and Missouri Rivers in northeastern Kansas.

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SCRAPERS.—The typical Pawnee scraper is roughly elliptical in shape, usually with one side more or less straight. It measures from 3 to 5 inches in width, 2 to 3 inches in depth, and is thick and heavy. It is chipped to a rough edge around three sides; the fourth is left blunt for grasping with the hand. For the most part these are of dark quartzite or sandstone but show relatively few signs of wear. They were probably used primarily for rough scraping of hides; universally present on Pawnee sites, they are rare in protohistoric and absent from prehistoric cultures of the area. (Strong, 1935, pl. 1, *a*, *d*.)

Keeled or plano-convex scrapers are found but rarely, save on early sites. A few large, rather coarse specimens, 3 inches or so in length, have come from the Hill site. Small, nicely made end scrapers of the planoconvex type are very plentiful on the Burkett site, where they are usually made of brown chert. They appear to be associated quite closely with the triangular unnotched points, with which they occur at Linwood, Schuyler, and Palmer; and, like them they decrease in later historic times.

RUBBING STONES.—These are usually flat, round stones, such as occur everywhere in the Republican, Platte, and Loup Rivers. They measure up to 5 inches in diameter by nearly 2 inches thick and were generally used without any retouching. A few specimens have been worked into discoidal form by pecking about the edges and appear also to have been secondarily smoothed and reworked on one or both faces. They were probably used in rubbing down hides; more rarely perhaps in grinding raw food materials.

DISCOIDAL HAMMERSTONES.—These are nearly always of quartz or some hard crystalline rock. They are from 3 to 4 inches in diameter and 1½ to 2 inches thick. The two faces are flat, while the edges are square with them. Many specimens are pitted in the center of each side, as though intended to be held between the thumb and forefinger for hammering with the edge. In a few cases the entire surface is slightly cupped. Sometimes the stones are somewhat elongated; in others, the edge is rounded instead of square with the faces. Discoidals are especially common at the Burkett site, where they are often much smaller than those of later date.

PECKING STONES.—Pecking stones are small granite, quartzite, or diorite pebbles, sometimes of discoidal form but more often elongate. They are usually 3 inches or less in length, with the ends much battered and abraded. Small, flat, circular pebbles are similarly worn about the edges. They were probably used in finer stone chipping, as, for example, to put grooves on stone axes and the like, and are found on all sites.

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BALLS.—Stone balls are artificially shaped out of granite or quartzitic material and occur naturally as small quartz pebbles. The shaped balls are from 1 to 2½ inches in diameter and generally are perfectly round; occasionally they are slightly flattened. They are not polished and generally show the dimpled texture of the fine secondary pecking. Their use is not known; they may have been for gaming or ceremonial purposes. In size and appearance, however, they suggest those used as heads for clubs, and it is possible that they were employed in meat pounding or in warfare, or possibly in stone boiling.

Natural quartz pebbles which show little evidence of retouching have also been found. They are usually whitish or pink in color, translucent, and about as large as a pigeon egg. One or two are highly polished, as though carried in a bag for a considerable time, but none were used as pecking stones. These, like the shaped balls, usually come from graves; they were probably fetishes.

Natural discoidals of iron pyrites, 2 inches in diameter, 1 inch thick in the center, and very heavy, have been found at the Hill and Linwood sites. They occur in pairs, with quartz crystals and other odds and ends, and were doubtless valuable talismans. Their use for fire making has not been reported from the area but may have occurred.

GROOVED MAULS AND AXES.—While fairly common, grooved mauls are generally of inferior workmanship with very few perfect specimens. For the most part they are irregularly shaped bowlders of granite or chert, somewhat smoothed and slightly grooved about the center for hafting. Very few required much modification and none appear to have been polished or even carefully smoothed by grinding. In weight they vary from 2 pounds or less to as much as 8 or 10 pounds. All bear abundant evidences of heavy battering and fragmentary pieces have usually been split lengthwise.

Two unusually fine mauls in the Hastings Museum may be noted here; one comes from the Hill site, the other from the Skidi village north of Palmer. The two are nearly identical in form and size, are perfect, and exhibit very good workmanship. They are of grayish crystalline stone, each about 4½ inches in diameter in the middle and tapering slightly to either face; the two faces are flat, measuring about 4 inches across. The length from face to face is 5 inches, with a well-worn groove about the middle. They weigh 4½ and 4¾ pounds, respectively, and have a finely dimpled surface texture; no effort has been made to grind or polish either implement.

Grooved axes are much less common than mauls. Several have been found at the early Linwood site, according to local residents, and include both chipped and polished specimens. The former are of chert, coarsely chipped, triangular in shape, and have only

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slight though obvious traces of a groove. The polished axes appear to be of the straight-backed, three-quarter groove type, nicely polished, and made of diorite or other dark material. Most of the latter have fairly long blades, similar to the grooved axes from Iowa, and are not unlike the fine specimens from the middle Gila area of southern Arizona.

CELTS.—Celts, either chipped or polished, are rarely found. Two specimens have been secured at the Palmer site and several others from the early village at Linwood. Chipped celts are usually somewhat almond-shaped, and made of yellowish-brown chert; they are seldom over 4 inches in length, with one side nearly flat, the other slightly convex. Polished celts are similar to those from the eastern United States generally. They vary in length from 2 to 5 inches, in width from 1½ to 3 inches, and are oval in cross section. The width is greatest at the blade and tends to taper toward the opposite end; the butt is generally rounded and in several instances appears to have been used as a pecking stone. Black diorite or other porphyritic materials were used for this type of celt, and invariably they have been well ground down and polished. A few small hematite celts have been found at the Linwood site, whence have come most of the polished celts as well.

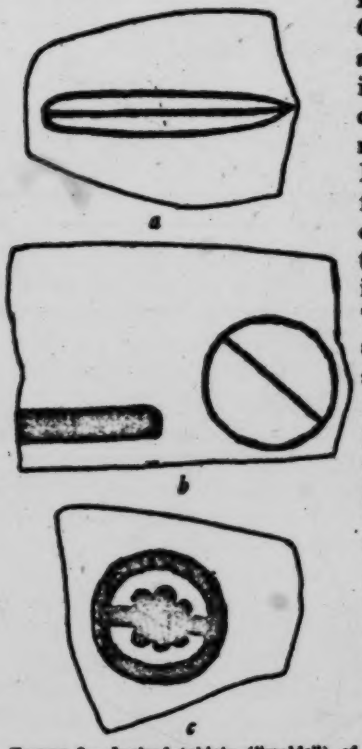

FIGURE 9.—Incised tablets ("molds") of stone from the Hill site (Hill collection).

The apparent concentration of this type of tool at the eastern edge of the Pawnee area, and in the early sites particularly, suggests that the tribe was formerly in much closer and more direct contact with tribes east of the Missouri and farther to the southeast. Save as paint, hematite occurs very rarely in Nebraska as a working material for primitive man, and to the historic Pawnee at least was apparently almost unknown.

INCISED TABLETS ("MOLDS").—This comprises a group of stone objects of unknown function. They are small flat slabs of limestone, shale, or some hard red rock, apparently catlinite. Into the

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surfaces have been cut various designs, for the most part of simple geometric character. The lines are deeply incised and give a very sharp, clear-cut cast of the various figures. The work may have been purely decorative in nature but there is a possibility that the incised slabs were used as molds. Heavy lead rings with three or more parallel flutings or ribs are one of the most common of grave finds (pl. 12, *g*); they are nearly identical with the cast obtainable from the mold represented by figure 9, *a*. Similarly, belt buckles could be easily cast by the use of the other molds figured, the shaded lines representing depressions and incisions (fig. 9, *b*, *c*). All of these designs are on specimens from the Hill site but far more elaborate and involved motifs cut into polished red stone occur at the early Linwood village (fig. 10). None of the stones, however, show the effect of heat, as would be expected if they had been subjected to treatment with molten metals, hence they may be merely decorated tablets. They have been found in graves as well as on the surface about village locations. (See Strong, 1935, p. 286.)

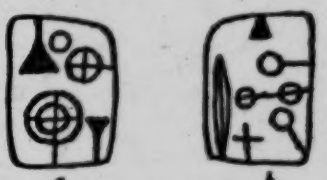

FIGURE 10.—Incised tablets ("molds"). Linwood site.

DRILLS.—Small T-shaped flint drills occur but rarely on the later Pawnee sites. They are usually less than 1½ inches in length, the transverse portion being slightly concave. A few simple drills of straight elongate form are also found.

PESTLE.—A single pestle has been recovered from the Skidi site near Palmer. It is of black gneissoid material, 12 inches long, 3 inches in greatest diameter and tapering to slightly less than 2 inches at the other extremity. The large end is much abraded and battered but otherwise the specimen is well worn, highly polished, and very nicely shaped. It represents a surface find.

CRYSTALS.—Two small quartz crystals, each about 1½ inches long with a yellowish, semitranslucent cast, were recovered at the Hill site. They are natural pebbles, unmodified, but have a smooth, worn appearance as though from long carrying in a pouch or cloth. They presumably represent fetishes.

"WHETSTONES."—These are always found as grave offerings and have been associated with the left hand of more than 80 percent of the adult male skeletons found at the Hill site. They are from 2 to 6 inches long and up to an inch wide. In cross section they are square, rectangular, and oval. A few are worn on the flat surfaces, as though from use as a whetstone, but the majority are merely shaped and slightly smoothed. They are of various materials, but usually of limestone, schist, or sandstone. It is doubtful whether

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most of the stones were intended for utilitarian purposes, and they may very well have been made for funerary or other ceremonial functions expressly (pl. 7, *a–m*).

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SHAFT POLISHERS.—These are always of dark brown, medium coarse sandstone, and are of one uniform type. They occur in pairs (pl. 7, *n*, *t*) and vary in length from 4 to 7½ inches. Almost invariably they are of the "nail-buffer" type, with a single longitudinal groove. Specimens with two grooves are absent, as are those with transverse grooves. All of the specimens figured are from the Hill site and are of unusually fine shape and workmanship; they have been used to only a slight extent but the grooves are nicely marked. Similar smoothers are found at most other sites and are in fact exceedingly widespread over the plains and adjoining areas.

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PIPES.—Stone pipes are the rule on all Pawnee village sites, with catlinite the most common material. The specimens figured (pl. 8, *a–k*) are from the Hill village on the Republican, with the exception of *h* and *i*, both of which are from the Burkett site. With two exceptions they are made of catlinite or some similar polished red stone; *a* is of gray, fine-grained material, and *g* is of coarse, friable red sandstone. In form they are nearly always of the elbow type, with the bowl at right angles to the stem, and commonly the stem is extended a short distance beyond the bowl. All were probably fitted with detachable stems of carved wood or reed, of which obviously few traces have survived.

The two large specimens in the center of the illustration, *e* and *f*, are of unusually fine workmanship, particularly as regards *f*. This pipe is 4¾ inches long with a bowl 1⅞ inches high by 1 inch square at the top; the bowl is still caked from much use. The effigy is about 2 inches long. The other pipe is a trifle shorter, but also has a square-topped bowl. According to Mr. A. T. Hill, the square bowl was indicative of chieftainship on the part of the owner, whereas the round-bowled pipes were the property of the medicine men and priests. The effigy pipe, *f*, was found with the remains of a child, over which lay the outspread skeleton of an eagle; *g* was in the same grave.

The tiny pipe, *i*, in the bottom row, is 1 inch long and has a squarish bowl with scalloped rim. Such small pipes are still highly prized by the older men of the Pawnee Tribe, and may hark back to the days when tobacco was used in very small quantities only in their ceremonies, instead of being smoked for pleasure. Two or three puffs would suffice to burn up all of the tobacco that would go into such a bowl.

Immediately in front of the bowl of this small pipe, i. e., nearest the smoker, may be seen a tiny vertical projection, which is pierced. The keel of *j* is similarly perforated and *h* has a deep groove cut

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about the end of the pipe. These devices were presumably for the attachment of a cord, which could be used to lash the pipes firmly onto their stems when in use, or to secure them against loss when carried with the sacred bundles on war and hunting trips. The comb in *d* may have served a similar purpose.

Unusual types are seen in *b*, *g*, and *k*. The first is slightly less than 1½ inches long, straight, and has a very slight taper; it is ornamented with a very well-executed face. The shape is reminiscent of the cloud blower of the pueblo area, though this particular pipe was undoubtedly fitted with a wooden stem; it is not at all typical of our area. As for the other two specimens, *g* and *k*, both have the bowl at right angles to the stem, but are fashioned from plain, subrectangular blocks of stone; *k* bears five notches on the outer side and two on the inner.

The specimens seen in *d* and *j* are also very nicely made and are remarkably symmetrical and well balanced. Added beauty is attained through the use of ornamental combs and keels, as already indicated, but these features appear not to have been very common.

According to Charlevoix,[64] the Pawnee claimed to have received the calumet directly from the sun. From this he concluded that the tribe "paid the sun a more ancient and distinguished worship than the other nations of that part of America, and that they were the first who thought of making the calumet a symbol of alliance." The priority in use here postulated has not yet been demonstrated, but there is a marked similarity between certain of the Pawnee pipes and those from earlier cultures of the area, save that the latter are not ordinarily of catlinite. It is quite possible that the elaborate calumets figured in our series will ultimately be traced back through the sandstone and limestone types of southern Nebraska to an earlier curved form of clay so far known in the State only from the Missouri Valley. These latter, while crude and roughly made, are suggestive of the trumpet-shaped pipes of the Iroquois,[65] to which they may bear a genetic relationship. The long-stemmed clay pipes of the southern Caddoans[66] are apparently lacking in Nebraska, although certain of the short-stemmed "variants" do resemble the pipes of the Pawnee.[67]

Work in Bone and Horn

Awls.—These are to be found nearly everywhere in the area but are most common on the prehistoric and protohistoric sites. There is no fixed type, although the majority of specimens appear to have

[64] 1903, vol. I, p. 308.
[65] Skinner, 1921, pp. 89–103 and figure 13.
[66] Harrington, 1920, pls. CI and CII.
[67] Ibid., pl. CIV, *e*.

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been made of whole bones, with the joints constituting the butts (pl. 9, *e*). Extremely long awls are not found, but there is nevertheless a considerable variation in their length and massiveness. Relatively few are made out of splinters, nor are they as a rule ground down to a perfectly round shape.

SHAFT STRAIGHTENERS.—Sections of bison and elk rib from 3 to 9 inches long were pierced by one or more small, perfectly round holes about three-eighths inch in diameter; in nearly every specimen the edges of the holes are well worn as by abrasion (pl. 9, *d*). These implements were presumably for straightening thin sticks, such as arrow shafts; they may also have served as gauges to assist in securing uniformity in the size of the shaft. Similar objects are found in the Mandan area[48] as well as in the prehistoric earth lodges of eastern and southern Nebraska, though commonly replaced in the latter areas by elk or deer antler; the latter type is almost never found in historic Pawnee sites.

PICKS.—The largest picks, possibly used as digging tools, were made of the ulnae of the bison, the upper end forming a very convenient hand grip. The specimen illustrated (pl. 9, *a*) is 12½ inches long and is much worn about the point. Smaller picks were of deer horn, readily made by simply cutting off a suitable tine. Those here illustrated (pl. 9, *c*) are each 7 inches long and still bear the marks of the tools used in cutting them off; the points are much worn down by long use.

HIDE SCRAPERS.—The typical adze-like scraper of the buffalo hunting tribes was also used by the historic Pawnee. It consists of heavy elk antler, with a straight handle some 10 inches in length, and a short, wedge-shaped extension at right angles to one end (pl. 9, *f*). Formerly blades of chipped stone were lashed to the inner or under side of the handle, but later this was replaced by iron. The specimen here shown is 12 inches long, with a diameter of 1⅝ inches; it is from the Hill site. Earlier cultures of the Republican and Loup Valleys have so far yielded none of these tools, suggesting that the type was of late prehistoric or early historic origin, at least among the Pawnee.

PAINT BRUSHES.—These were made from the cancellous inner portions of large bones and joints. They are thin, flat, often more or less wedge-like in form. One side is brought to a thin, fairly sharp edge, as though for making fine lines; the remaining three sides are broader. All of the specimens figured (pl. 9, *g-n*) are from graves at the Hill site and the majority of them still bear quantities of unused red, green, or yellow coloring matter in the interstices of the bone. They were probably used for painting the face and body, as for ceremonial purposes; the porosity of the bone acted as a sort of

[48] Will and Spinden, 1906, p. 170.

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reservoir to hold quantities of paint, while broad or fine lines could be secured through proper manipulation of the tool. Similar brushes were reported by Will and Spinden from the Mandan area;[68] they occur in protohistoric sites but have not been found in prehistoric cultures of the Pawnee region.

HIDE TANNERS (?).—This term is tentatively employed to designate a group of objects made by cutting off the end of a large bison or other bone, through the spongy portion of the joint (pl. 9, *b*). Sometimes they are simply hemispheres prepared by trimming from the ball of such a joint. The spongy under side is usually much worn, with small sand grains firmly embedded in the interstices. Very often the bone is permeated, especially on its under side, by some sort of animal matter, grease, or similar substance. The tool was obviously used for rubbing, and it is quite probable that in the process of tanning hides some such implement was utilized for working animal brains and other dressing substances into the fresh skins. Skinner reports a similar find from a Cayuga grave near Scipio, N. Y., but as the specimen appears to be partially drilled he was inclined to regard it as an ornament.[70] Those from the Pawnee area are never perforated and their use as ornaments is questionable.

BEAMING TOOLS.—Several of these tools were secured from cache 2 at the Hill site by the Nebraska Archaeological Survey in the summer of 1930. They consist simply of the long ribs of the bison with the broad end trimmed to a convenient size for grasping; all were of this one uniform type. According to Wissler,[71] they were used in the preparation of buckskin; the skin was placed over a rounded tree section or log and scraped thin with a beaming tool. The latter was grasped at both ends and was manipulated in the same manner as a drawshave, the motion being toward the operator. This particular type has not as yet been found in prehistoric cultures in Nebraska and does not appear to be especially common at any of the historic villages, though, on account of its unworked appearance, it is easily overlooked. (See Strong, 1935, pl. 1, fig. 2, *b*.)

DIGGING TOOLS.—The characteristic digging tool and hoe of the Plains area was the bison scapula (pl. 10, *a–d*), which was practically the only type used by the Pawnee. They were made by trimming the scapula to a square or rounded spade-like blade at one end and usually cutting off the joint end to provide a round butt. Of those illustrated, *a* and *b* are typical Pawnee, with the square blade; they come from the Hill and Palmer sites, respectively. The other two, *c* and *d*, are from a cache some 3 miles east of Genoa, Nebr.,

[68] Will and Spinden, 1906, p. 171.
[70] Skinner, 1921, p. 74. See also Wissler, 1910, p. 70.
[71] 1927, p. 64. According to Dr. W. D. Strong the beaming tool is used primarily for dehairing the hide among the Naskapi Indians of Labrador.

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and while probably of Pawnee make are much less typical of the culture, as the spade-like type has never yet been found in the known Pawnee sites. In size they vary considerably; *a* is 14 inches long by 7 inches wide, *b* is 11 inches by 6 inches, *d* is 15 inches long by slightly less than 6 inches. In all cases the ridges on the reverse side have been cut off, mostly very roughly, and all show signs of much wear. They are also found in earlier sites along the Republican, Loup, and Platte Valleys, and are by no means confined to the Pawnee.

FLESHING TOOLS.—These were made from the metapodial bones of the bison, deer, or elk, and are mostly of good workmanship. They are gouge-shaped, with the butt formed of the natural joint, and the working end is almost invariably provided with tiny notches to give a finely toothed edge (pl. 10, *e–k*). Occasionally they were pierced by a small hole near the working edge, doubtless for insertion of a thong which was looped over the wrist for added security in operation. In length they vary from 6 to 9 inches, but in all other respects they are highly uniform. When in use they were held in the hand like a pick or dagger, and were drawn toward the operator; as indicated by the name, they were used in removing clinging flesh and fat from hides prior to tanning them. The specimens illustrated are from the following sites: *e*, *j*, and *k* from Palmer, *f* and *g* from the Hill site, *h* and *i* from Clarks. They have been found so far only in post-Columbian Pawnee sites, in Nebraska at least, never in prehistoric cultures of the area. They represent, however, a type very widespread throughout Canada and in parts of the United States east of the Rockies.[72] Archeologically, they have been reported from the Mandans,[73] and identical specimens in the Hastings (Nebr.) Museum are from shell heaps in the vicinity of Tarpon Springs on the west coast of Florida.

FIGURE 11.—Tubular bone object, probably a plume holder, from Hill site (Hill collection).

PLUME HOLDERS.—These are short, cylindrical sections of animal bone, not more than 1¾ inches long, with four conical perforations near one end (fig. 11). They are well polished and are represented by specimens in various stages of manufacture.

According to information secured by Mr. A. T. Hill from old Pawnees, these objects were used as plume holders in the headdresses. They were lashed, by means of the perforations, to a thin plate of bone about 2 inches wide by 4 or 5 inches long, bent so as to fit the top of the head longitudinally. Plumes were then set into the cylinders, which held them upright; a single plume and plume holder were used by each indi-

[72] Wissler, 1927, p. 64.
[73] Will and Spinden, 1906, p. 189.

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vidual, as a part of the deer-tail headdress. Similar devices are used by the Dakota and other Plains tribes. One complete specimen and a few in various degrees of completion have been recovered, all from the Hill site. They are in the Hill collection at the Hastings Museum.

ROACH SPREADER.—This piece, from the Hill site, is carved of thin bone or antler and is about 5 inches long (fig. 12). It bears several rows of tiny pits filled with red pigment and is pierced by 8 small holes, 5 of them at the round end. It was undoubtedly used to spread the deer's hair crest or roach sometimes worn as a headdress by the men; the 5 holes at the smaller end were for attachment of a plume holder of the type above described. In 1933 the present writer saw similar objects in use near Walters, Okla., among the Comanche, who claimed to have borrowed the idea from the Pawnee or Osage (cf. Fletcher and La Flesche, 1911, pl. 55 (Omaha); and Skinner, 1921, a, p. 113 and fig. 2 (Menominee)).

FIGURE 12.—Roach spreader from Hill site (Hill collection).

CHIPPING IMPLEMENTS.—Deer-horn flakers are relatively scarce in Pawnee sites but were very common in earlier times. They are from 4 to 6 inches in length, less than an inch in diameter, and are slightly curved. Usually they appear to have been cut from the basal portion of the antler and are very much worn; the end is commonly nicked and cut, as by small flakes of flint. They occur commonly in eastern Nebraska and have been reported from south-central Missouri (Pulaski County)[74] as well as from Cayuga, Seneca, and Neutral sites in New York.[75]

In addition to the foregoing type there is one made by cutting a semicircular piece diagonally out of a heavy leg bone of bison or elk. These pieces fit the fingers very conveniently, are much worn, and usually are deeply scored about the edges and at either extremity. They are quite abundant at all sites, but are not usually regarded as of any consequence by amateur collectors.

TEETH.—A number of teeth have been found on the surface at the old Skidi village north of Palmer as well as in caches at the Hill site. A single specimen, presumably the canine tooth of a bear, has a perforated root for suspension; otherwise all are unmodified.

[74] Fowke, 1922, pl. 35.
[75] Skinner, 1921, p. 92.

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Molar teeth of bison and elk are also very common, but were not worked for ornamental uses.

CORN SHELLERS.—A rather common find in caches is either half of the lower jaw of a deer, wolf, or some similar animal, in which the teeth have been very much worn down on one side. The jawbone also frequently shows signs of much friction and wear. There is a possibility that these objects were grasped in the hand and used to scrape the corn from the cob in preparing it for cooking. None of the early writers mention this as a method, but it is entirely feasible, and has been reported for the Iroquois (Parker, N. Y. State Mus. Bull. 117, p. 544, 1907).

HORN SPOONS.—Bison horn was commonly used in making ladle-like spoons, by the simple expedient of cutting the horn in two lengthwise and then trimming off the edges of each piece; sometimes the small end was pierced as for suspension. Irving records them as being used by each individual,[76] and they are not infrequently found in graves, though their thinness renders them rather perishable. No mountain sheep horn has been found as yet, probably due to the presence of hostile tribes between the Pawnee and the range of that animal.

WORK IN SHELL

CLAMSHELLS.—Large Unio shells are fairly common in Pawnee villages, both as surface finds and in the graves and houses; a cache of about a dozen was found in the north edge of the lodge excavated by the Nebraska Archaeological Survey, as has been previously mentioned. Two species of shells from this site have been identified by Dr. Frank C. Baker of the University of Illinois. They are *Proptera alata megaptera* (Raf.) and *Lampsilis ventricosa occidens* (Lea). Generally these shells are unworked, but a few are notched as though for attachment of a handle; incised or carved specimens are extremely rare. They are commonly found in graves and caches with paint materials in them, and probably served principally as receptacles. A few show pronounced wear on the edges and were apparently used as digging or scraping tools.

Ornaments of historic Pawnee workmanship, so far as the archeological record is concerned, seem rarely to have been made of shell.

TUBULAR BEADS (?).—A rather interesting class of shell objects is illustrated in plate 8, *m*. They are long white cylinders, very often tapering slightly toward the ends, and are perforated longitudinally. In length they vary; the upper two in the illustration are 4½ inches long, while the shortest is less than 3 inches; they average from one-fourth to three-eighths inch in diameter. Usually they are covered

[76] 1835, vol. II, p. 13.

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with a rusty coating, readily removed, and some are rather badly weathered; all are soft and chalky in texture. Sometimes, as in the second specimen from the bottom (pl. 8, *m*), they are unperforated but have a groove about one end. They were probably made from the columella of the conch or from some very thick-walled bivalve. They occur as grave finds, always in pairs, and are nearly always found one on each side of the head; doubtless their purpose was for ear or hair ornamentation.

Identical objects are described by Holmes[77] as common on the Pacific coast, where they were made "from the thick valves of the *Pachydesma crassatelloides* or the *Amiantis callosa*." As to their use, the same observer says, "They were probably used as beads for the neck and as pendant ornaments for the ears. The longer specimens may have been worn in the nose. It is also said that beads of this class were used as money."[78] A specimen 4½ inches long in the Dinsmore collection at the University of Kansas Museum probably comes from an early historic Kansa village on the Missouri. For the most part the workmanship and drilling of those from the Pawnee area are so perfect that there is a strong possibility of their being trade pieces from the whites rather than of actual aboriginal manufacture. They do not occur in prehistoric cultures of Nebraska, so far as known at present.

A string of small tubular shell beads, each three-eighths inch long by less than one-eighth inch in diameter, are the only approach to "wampum" yet found; they are from a historic grave. Irving, in describing the appearance of the Republican Pawnee chief in 1833, states that "a long string of wampum, the only ornament he ever wore, hung from his neck . . ."[79] Disk shell beads are altogether absent in Pawnee sites, although prehistoric ossuaries in southern Nebraska have yielded thousands of them. In general, beads and shell work of any kind represent a very minor phase in Pawnee culture, in historic times at least.

Work in Wood

Mortars.—A large wooden mortar from a grave at the Hill site is the sole representative of this class of utensil. It is made from a section of tree or log, standing 14 inches high, and is between 9 and 10 inches in diameter. The grinding cavity in the top is 6½ inches deep by 8½ inches in diameter and is encircled by a square lip. The mortar stands on three legs, each about 2 inches high, and the under side is much worn by long use. No pestle was found with it. While

[77] 1883, p. 226.
[78] Ibid.
[79] Irving, 1835, vol. II, p. 120.

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*172 322 412 in a somewhat fragmentary condition when found, it has been quite accurately restored by Mr. Hill, and all of the features, such as the legs and the cavity, were reconstructed on the basis of pieces that clearly showed the original shape.

Though scarce in an archeological way, these mortars were apparently in common use in historic times. According to Irving,[80] they were hollowed out "by kindling a fire upon the top of a block of wood, into which it gradually sinks itself, until it forms a sort of bowl." They were usually of about the size above described or slightly larger, and were used for grinding corn, "by using a billet of wood as a pestle".[81] From this report it would appear that the wooden mortar was used in place of the stone metate, which is further indicated by the almost total absence of the latter; the perishable nature of the wood accounts for the rarity of mortars of that material.

*172 322 415 Bowls.—Three of these have been recovered from graves at the Hill site and are almost complete. One specimen is 8 inches in diameter, 2½ inches deep, and a half inch in thickness, with a sharp lip; one side is continued up an inch or so higher and prolonged into a sort of unperforated lug or tab. Another vessel is 5½ inches across, 2½ inches deep, and three-eighths inch thick, with a rounded lip. The third is deeper and more like a mug; it measures 4 inches in diameter, 3 inches in minimum and 5 inches in maximum depth, with a flat bottom. On the highest side is an ear; the walls are quite thin and the lip flares outward somewhat. None of the pieces shows the concentric growth rings, thus suggesting that they were made by steaming and bending into shape slabs from the side rather than from the cross section of the tree.

Fragments of small, thin-walled wooden vessels were recovered from burial 3 at the Hill site by the Nebraska Archaeological Survey, but were inadequate for a proper reconstruction.

Platters.—The one example so far found is 11 inches in diameter, less than an inch deep, and has a thickness of a half inch or thereabouts. The edge is round and shows much wear, as in fact does the vessel in general. It tends to crack in a somewhat parallel fashion entirely across the width, rather than radially from the center, suggesting that it is made of a slab from the side of a tree. It was found in a grave at the Hill site.

*172 322 854 Cradle board (?).—Few whole or even nearly complete cradle boards have been recovered. The finest specimen, which may or may not be correctly designated, was found in a grave at the Hill site. It measures 30 inches long by 11 inches wide, with a 1¼-inch border.

[80] 1835, vol. II, p. 83.
[81] Ibid.

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The border is carved with zigzag lightning symbols. The emblem of the sun, 5 inches in diameter, with 4 long and 12 short rays, is neatly cut into the upper part of the piece, which is further embellished with brass-headed tacks (Nebr. Hist. Mag., x, 3, 1927, p. 192). It is a most unusual and attractive piece of work and was very likely made by Indian craftsmen. Fragments of other nicely decorated boards have been recovered, but none is sufficiently large to permit a good reconstruction.

MISCELLANEOUS.—Wooden boxes and chests, bound with leather or metal and studded with large-headed nails, are not uncommon, though always in fragmentary condition. Wooden-backed mirrors, sheaths, and numerous other odds and ends are frequently found, nearly always with rows of nails as ornamental features. The clumsy workmanship probably indicates that most of them were made by the Indians themselves, in imitation of the white man's articles. Occasionally a better piece is recovered, perhaps with a lock or hinge, these being probably imported and trade articles. Pipestems of light carved wood have been found in a few cases but were too fragmentary for accurate restoration.

MISCELLANEOUS OBJECTS

GLASS BEADS.—These were in very extensive use by the Pawnee after the arrival among them of white traders. Small white, blue, and red beads, of transparent glass, are by far the commonest, especially in graves, while black appears relatively infrequently. Tubular porcelain beads, less than one-half inch long, are also found, though not very plentiful. Large, irregularly shaped blue, red, and colorless beads, mostly translucent, have been regarded as of Indian manufacture because of their crudity (pl. 8, *n*). Samples of these were submitted to M. W. Stirling, of the Smithsonian Institution, for examination and were pronounced by him to be trade material from the Hudson Bay Co., probably via the Missouri.[83] All of these were from the Hill site, abandoned about 1810. There is thus no positive evidence that the Pawnee ever manufactured their own glass beads, though the custom was followed by the Arikara, Mandan, and other upper Missouri River tribes in historic times.[84]

METAL WORK.—Iron and copper become increasingly common with recency. Iron "squaw" hoes, gun parts, axes, chisels, bridles, stirrups, knives, and innumerable other odds and ends abound on the

[83] Letter of Oct. 13, 1930.

[84] Lewis and Clark, 1922, vol. I, p. 238. However, excavation at the Burkett site in April 1931 yielded a number of turquoise-blue, glass beads of rough manufacture and imperfect glass. According to Dr. W. D. Strong, these are closely similar to a native-made specimen of glass work secured by Dr. Mathew among the Arikara in 1870, now in the National Museum.

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later sites (pl. 12). The hoes were often cut up and the material remade into arrowpoints, scrapers, and similar objects. Gun barrels appear to have been likewise used as tent pins, stakes, and the like. Fluted lead rings are very common, though they may be of native casting. Coincident with the increase in metal goods there is a marked decline, quantitatively and qualitatively, in native products, such as pottery and stone work, and since the former are less durable the later sites are rather barren. Despite the Caucasian influences to which the Pawnee were subjected from very early times, however, they retained enough of their aboriginal material culture to furnish a fairly accurate picture of their pre-Columbian mode of life and to make possible the tracing of their culture back to its less well-defined antecedents.

Weaving and Textiles

Cloth and cordage.—The only fiber woven by the Pawnee appears to have been the hair of the bison. Fragments of cloth made of this material and short pieces of cordage are occasionally taken from the graves (pl. 2, *g*, *i*), though none of the early observers seem to record the trait. The cloth is made of a moderately heavy 2-ply closely twisted yarn, each member of which in turn consists of a number of rather loosely spun fibers. There is no uniformity of weave, however; in the same piece may be found twilled or diagonal (over two under two) weaving and checkerwork (over and under). The cloth is fairly heavy, soft, and flexible; in color it varies from brown-black to black. It was used presumably for robes and winter clothing.

The yarn sometimes occurs in short, rope-like masses, of 10 or 12 cords twisted together but not braided (pl. 2, *h*). Whether these are indeed fragments of rope or merely skeins of yarn conveniently arranged for storing is uncertain. However, the low tensile strength of the material, and especially the readiness with which the "ropes" tend to untwist and become further weakened, argues against their use where strains were likely to occur. Braided ropes of bison hair have not come to light, although they may have been manufactured.

Spindle whorls, if used, were probably of wood or other perishable material, as none have yet been found.

Matting.—Pieces of rush matting were recovered by the Nebraska Archaeological Survey at the Hill site, mostly as a body wrapping in burial 3. Remains of a charred mat were also found on the west side of the lodge circle, as previously described. Additional fragments have been collected by Mr. A. T. Hill. All of the specimens are made of some narrow-leaved grass or rush, possibly cattail, and are in simple twined weaving (pl. 2, *j–l*). Each warp ele-

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ment consists of two or more members twisted together into a thick, rounded cord; the space between warp elements is generally about 1 inch. The weft consists of rushes, used in pairs; these make a half turn on each other between every two warp elements, one member passing on either side of the warp. The manner of treating the edges is not known; they may have been finished in selvage, but there is nothing to indicate that such was the case.

Mats, according to Dunbar,[84] were used on the floors of the lodge, on the beds, and as curtains in front of and between the sleeping compartments. They were also used for wrapping the bodies of the deceased for interment, as has been indicated above.

BASKETRY.—Coiled baskets were made by the Pawnee, according to Weltfish,[85] but no traces of basketry have so far come to light in excavation. The foundation of the coil consisted of a single element made by splitting willow or cottonwood twigs radially into three segments, which were then used with the apex upward. Willow or elm splints supplied the sewing element. Viewed from the inside of the basket, the coiling was in a clockwise spiral. The stitches did not interlock. The usual form of basket appears to have been a shallow, flat-bottomed bowl, with flaring lips.[86] Scanty but unmistakable evidences of coiled basketry of a high order of workmanship have come from the prehistoric Missouri River earth lodges of Nebraska, in the form of impressions on lumps of clay, but the historic Pawnee sites have not yet shown the trait. (Strong, 1935, pl. 16, *f*.)

MORTUARY CUSTOMS

In disposing of their dead the Pawnee practiced inhumation exclusively, at least within historic times. For the most part the rituals and general procedure were similar to those of their semisedentary neighbors, such as the Omaha, Oto, Ponca, and Kansa.[87] The graves were almost invariably on the highest hills near each village; if the hills were more than a mile or so distant interment was sometimes along the edges of ravines or the immediate banks of streams nearer the village. Low tumuli were raised over the remains.[88] These have since been entirely obliterated, so that there is at present nothing whatever in the way of surface indications to mark the graves. Where two or more bands occupied the same village, each appears to have had its own cemetery. The burial customs of all of the bands were, however, identical, hence will be

[84] 1918, p. 600.
[85] 1930, pp. 277–286.
[86] Ibid., p. 286.
[87] Long, 1823, vol. II, pp. 281–282.
[88] Ibid., p. 281; Irving, 1835, vol. II, p. 102; Oehler and Smith, 1851, p. 31; Clayton, 1921, p. 90; Bushnell, 1927, pl. 36.

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collectively treated as a tribal trait. For the most part information comes from the Hill site, and is based primarily upon the researches of Mr. A. T. Hill and of the Nebraska Archaeological Survey.

Three graves were opened by the survey party at the Hill site, in August 1930, all on the west slope of the main burial hill south of the village. Burial 1 was that of a very young child. It lay at a depth of 3 feet, in a small, ill-defined grave. The bones were so badly decayed that the orientation of the body was not determined. A single broken iron ring, a metal disk, and a tiny catlinite pipe with one notch on the stem were the sole offerings.

Burial 2 (pl. 11, *c*) was that of a subadolescent about 10 or 12 years old and was in very good condition. The grave was 3 feet 6 inches deep, 4 feet long, and some 18 inches wide. The skeleton lay on its left side, the feet drawn up toward the buttocks, and the knees and arms extended toward the front; the head was to the north. Immediately at the back of the cranium lay a half-cylindrical iron vessel with a small spout, apparently an army canteen of early nineteenth century type (pl. 12, *a*). Lumps of red ochre were found about the waist and to a lesser extent near the feet. All traces of clothing had long since disappeared, save for a quantity of colored glass beads about the feet, which probably came from moccasins.

Burial 3 (pl. 11, *a*, *b*) was the richest of the group. It was that of a small child, poorly preserved. The grave was 4 feet deep, 34 inches long, and 18 inches wide. The skull, rather badly broken, lay to the south; the rest of the skeleton was too fragmentary to yield any clues as to the arrangement of the body and limbs. The body had been completely wrapped in twined reed matting and then covered with bark. Over the whole, in disorderly fashion, lay several broken slats of worked wood about 2¼ inches wide and less than a half inch thick; the longest measured 17 inches, another 9 inches, the latter with two holes near one unbroken end. All of the wood was painted a dark purple and was very nicely smoothed; it was probably the framework of a cradle board. Near the middle of the body were a number of glass beads, apparently from a beaded belt or shirt front. The soil about the feet was literally impregnated with more beads, mostly white, blue, and red, doubtless from the decayed moccasins. Several heavy lead rings about three-eighths of an inch wide, a broken shell or bone gorget, and small fragments of other shell trinkets complete the list of funerary offerings.

A week after the operations just described the writer opened a grave discovered by Mr. A. T. Hill at the Palmer site. The grave was about a quarter of a mile due north of the village near the summit of one of the principal burial hills and had been revealed in cross section by recent deepening of a roadside ditch. The total

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depth was 5 feet 6 inches, of which 4 or 5 inches was due to downward creep of the hillside soil subsequent to interment. The burial cavity measured 33 inches east to west by 24 inches north to south; it had been undercut quite noticeably toward the north, so that the contents did not lie directly below the original mouth of the grave. The remains were those of a young child not over 6 or 7 years of age, and were exceptionally well preserved (pl. 11, *d*). The skeleton lay on its right side, with the head toward the east. The feet were folded closely against the buttocks, with the knees partially drawn up toward the body. The right arm lay fully extended just in front of and along the body; the left arm was folded over the pelvis. Immediately in front of the knees was a small gray pot, inverted and empty (pls. 3, *c*; 11, *d*). The only other objects were fragmentary lead rings, two of which lay on either side of the cranium in such a position as to predicate their use as ear pendants.

Bushnell,[29] in discussing Pawnee burial customs, states that "according to Francis La Flesche the bodies were placed in the graves in a sitting position." This statement is wholly at variance with the results of archeological work in the historic sites. Upward of 40 graves have been opened at the Hill site in the past 8 years, yet not one instance of a skeleton in a sitting position has come to light. Similarly the work at the Palmer, Linwood, and other important sites has failed to disclose any verification of La Flesche's statement, and present indications are that so far as the Nebraska Pawnee were concerned interment in a sitting position was uncommon.

As was noted in each of the cases above described, the bodies were usually flexed, wholly or in part, doubtless to conserve space. The bodies were never consistently oriented with reference to any of the cardinal points of the compass, nor were they laid any more frequently on the right side than on the left, or vice versa. Undercutting of the grave, especially toward the north, was quite common; the amount varied with the depth, which was usually between 3 and 6 feet. The soil covering the bodies is generally mottled and mixed with organic material and of a looser texture than that elsewhere.

The bodies were usually wrapped in matting or bark for interment and were always accompanied by mortuary offerings. Shaped stones (pl. 7) from 3 to 6 inches in length are nearly always found in or near the left hand of adult males. The offerings are most commonly found in front of the body if lying on its side, or on the chest if lying face upward. At the Hill site flints and steel, glass beads, lead rings, wooden-backed mirrors, knives, shell gorgets, Spanish, British, and American peace medals, military buttons, cloth, foodstuffs, and innumerable other odds and ends were used as offer-

[29] 1927, p. 79.

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*172 764 ings. A wild-cat skull with a copper military button set into each eye socket was taken from a grave at the Hill site; it doubtless represented a fetish. Occasionally rodent skulls, crystals, animal claws and teeth, and similar objects are found close together, as though originally contained in a bag. Catlinite pipes (pl. 8) are sometimes found; pottery is very seldom present.

It is of interest to note that sometimes a skeleton is found minus an arm, a leg, or even a skull, though otherwise well preserved. Such individuals may have been victims of a raid or of some other mishap. Amputation by cutting through the bones seems to be absent.

CONCLUSIONS

*172 105 In the preceding pages an attempt has been made to present the available traditional, historical, and archeological evidence bearing on the historic and protohistoric culture of the Pawnee. Here we endeavor to correlate these various lines of evidence, pointing out certain of their wider cultural implications, and attempting to fit the Pawnee into the general scheme of aboriginal American culture. To do so solely on the basis of the material here presented may seem premature, yet the writer is convinced that for the sake of future work these suggested relationships, even if more or less tenuous, should be indicated. Hence we will briefly discuss each of these three major headings in order.

The only point on which all Pawnee migration traditions agree is that the tribe originally lived to the south of its historic habitat, though the exact locality varies somewhat. Dunbar intimates that the ancestral home was with the Wichita on the lower Red River,[90] whence the two tribes moved northward as one people. Grinnell, on the strength of what he regarded as the oldest migration legend of the tribe, postulates "an original home for the Pawnees in Old Mexico, and . . . a possible connection with the so-called 'Pueblo tribes'. . ."[91] The statement recorded by this authority to the effect that the Pawnee formerly dwelt in stone houses in the southwest[92] is hardly to be taken at face value. There is virtually nothing in Pawnee material culture to suggest pueblоan influences, and since there was frequent contact between the two groups all through historic times the idea of a former use of stone habitations may be a relatively late and superficial addition to the account. Dorsey[93] carries the tribe back only as far as southeastern Nebraska, near the present site of Nemaha, and his traditions cast relatively little light

[90] 1880, a, p. 231.
[91] 1893, p. 224.
[92] Ibid.
[93] 1906, p. 8.

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on the problem of their southern home. Linguistic and ethnological studies among the southern Caddoan peoples and the fact that the Pawnee were in much closer contact with peoples to the south than with those to the north of the Platte have long since made it a certainty that the ancient habitat of the tribe lay somewhere near the Gulf coast, probably in southern Texas or northeastern Mexico, from where the northeastward movement took place.

The Skidi, we may note here, stood in a somewhat unique relationship to the other three bands. The traditions just reviewed relate primarily to the latter, i. e., to the Grand, Republican, and Tappage divisions, uniformly omitting the Skidi. The latter band claims to have lived always in the Valley of the Loup, where they were created, and, in conjunction with the Arikara, performed the first tribal ceremonies.[94] The Skidi always regarded themselves as more closely related to the Arikara than to the rest of the tribe, and it is possible that the latter at one time may have been under Skidi control. Dunbar presumed that they were descendants of one of the resident tribes conquered by the Pawnee upon their arrival on the Platte.[95] It has been further suggested that they represent the parent stock from which sprang all of the northern Pawnee bands as well as the Arikara.[96] Grinnell alone states that the Skidi were the last to arrive, coming "after the northern migration of the tribes and their settlement in northern Kansas and Nebraska";[97] the other observers state, or at least imply, that they were earlier. Not improbably the Skidi-Arikara group preceded the other bands into the Platte region, established themselves firmly, and came to regard their kindred as intruders when they arrived. Misunderstandings and violent quarrels were not uncommon between the Skidi and Grand Pawnee bands, even in later times, and possibly early punitive expeditions on the part of the latter, supported by the Republicans and Tappages, gave rise to the claims that the Skidi were a conquered tribe.[98] Thus there need not have been a great disparity in the time of arrival between the various divisions.

As to the time of arrival of the Pawnee in the Platte Valley tradition is silent, and there is little to guide us in making even an estimate. On the basis of linguistic studies Dunbar adduced the following:

> The language affords some evidence that their residence in the Valley of the Platte has been of some duration. *O-kut-ut* and *oku-kat* signify strictly *above* and *below* (of a stream), respectively. Now their villages have usually been

[94] Dorsey, 1904, p. 13.
[95] 1880, a, p. 252.
[96] Dorsey, 1906, p. 9.
[97] 1893, p. 215.
[98] Dunbar, 1880, a, p. 252.

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situated upon the banks of the Platte, the general course of which is from west to east. Hence each of these words has acquired a new meaning, i. e., *west* and *east*. So, also Kir-i-ku-ruks-tu, *toward* or *with* the Wichitas, has come to mean *south*. Such developments are perfectly natural in the history of a language but require time."

Dorsey[1] and Grinnell[2] merely place it at a time long before the coming of the white man. From historical data it appears probable that the tribe was somewhere north of the Kansas River by the time of Coronado's visit in 1541, and by 1673 the location of the Pawnee and neighboring tribes was essentially the same as it was at the opening of the nineteenth century.[3] This, together with the prehistoric and very early historic archeology, so far as it is now known, rather indicates that the Pawnee were firmly established in the Platte and Republican Valleys by the opening of the sixteenth century, and quite possibly long before that time.

Before leaving the subject of traditions we may briefly speculate on the identity of the peoples who were driven out of the northern valleys by the immigrant Pawnee. Dunbar's theory of a Siouan occupation is scarcely tenable, at least in the light of our present knowledge, since it is generally conceded that Oto, Ponca, and Omaha reached the area after the Pawnee had become permanently settled there. Tradition affords no information whatever, and neither Dorsey nor Grinnell even mention the conquest element. Lewis and Clark speak of the Comanche (Padouca) as having been at an earlier time in the region immediately west of the Pawnee.[4] Between this last tribe and the Pawnee there was ceaseless hostility, the former having a fortified village in the forks of the Dismal River.[5] How long the Padouca were in the region prior to this time there is no way of determining as yet, but it is quite possible that that tribe formerly held lands farther to the east which subsequently were wrested from them by the Pawnee. Continued warfare between the two tribes, even without any general conquest by one or the other, would tend to encourage traditions of great exploits, especially in the event of a particularly successful campaign. Another possibility is that the northward movement of the Pawnee combined with the southward pressure exerted by Shoshonean peoples, such as the Comanche, resulted in the expulsion from the plains of some Athapascan tribe. Thus the Apache and Navaho, who resided generally south of the Comanche, or some people ancestral to them, may have been forced into the southwest some centuries prior to the arrival

[1] 1880, a, p. 251.
[2] 1906, p. 8.
[3] 1893, p. 215.
[4] Marquette map, 1900, p. 108.
[5] 1815, 35 ff. See Thomas, 1935, for early history of the Apache and Comanche.
[6] Fletcher and La Flesche, 1911, p. 88.

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of the Spanish. Space limitations forbid a more detailed consideration of this very interesting problem at the present time, but it seems quite plausible that either a southern Shoshonean or Athapascan people preceded the Pawnee in what is now central Nebraska.

The historic data on the Pawnee reveal two facts of major interest. In the first place there appears to have been a steady diminution in the amount of territory actually occupied by the Pawnee villages. Nearly all of the early maps and narratives by Spanish and French explorers, beginning with Coronado and continuing well into the eighteenth century, refer to the various Pawnee groups as inhabiting a considerable number of villages. That there was frequently exaggeration in their number and size is true, but taken in conjunction with political survivals in the matter of Skidi government as recorded by Murie,[6] together with the fact that subbands within each of the four major bands appear to have been originally separate village units,[7] it seems quite probable that formerly there were a number of separate villages scattered along the Platte, Loup, Republican, Blue, and Smoky Hill Rivers, as well as along the Missouri Valley and tributary streams in southeastern Nebraska and northeastern Kansas. In very early historic times these were for the most part given up, and by 1800 there were apparently only three or four major villages, one on the Republican and the others in the Platte-Loup region. The former was shortly abandoned, so that from 1809 until the final removal to the Indian Territory, the tribe dwelt generally in 2, 3, or 4 large settlements at various points along the lower courses of the Loup and Platte Rivers. This gradual concentration in a single small area was due probably in large part to the encroachment of hostile peoples, notably the Siouan Tribes on the east and north, and Athapascan or Algonkian groups on the west and south. The situation was not wholly unlike that postulated for the pueblo peoples about 1000 A. D.,[8] although it took place, of course, much later and with somewhat different consequences.

Secondly, the introduction of the horse deeply affected the Pawnee, as it did most of the plains tribes. Forays to the Southwest in quest of horses led to increasing contact with tribes there resident, though there seems to have been strikingly little influence on Pawnee material culture from these meetings. More important than this was the tendency toward a nomadic, bison-hunting mode of life made possible by the horse. Hand in hand with this went a decline in the native arts, particularly in ceramics, and an increasing dependence upon the white man's importations. From a sedentary

[6] 1914, pp. 548 ff.
[7] Grinnell, 1893, pp. 236–239.
[8] Kidder, 1924, pp. 125 ff.

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tribe the Pawnee became one in which the chase and maize culture shared almost equally. In general, while the adoption of the horse added new traits to the general pattern it was also a potent factor in the final submergence of Pawnee culture which ensued in the closing years of their residence in Nebraska.

The Pawnee made use regularly of three general types of habitation, depending upon the season and the attendant mode of life. The typical form, universally employed in their permanent villages, was the circular, dome-shaped earth lodge, housing from 10 to 40 or more persons. In its most essential features it did not differ greatly from the lodges of the Kansa, Oto, Omaha, and other neighboring tribes. According to Linton,[9] however, there was one rather significant distinction, viz, the greater variability in number of the central roof supports used by the Pawnee as compared to the earth lodges of the Mandan, Arikara, and Hidatsa. The latter consistently used four posts, whereas the historic Pawnee, as has been previously noted, had from 4 to as high as 11; only 4, however, figured in the Pawnee ceremonies connected with the earth lodge. From these facts Linton concludes that the ancestral type is most closely approximated in the lodges of the Arikara and their immediate neighbors, who had standardized the number of central posts, whereas the Pawnee had adopted the trait at a time so recent that this feature had not yet become fixed.[10] He further suggests the origin of the type on the lower Mississippi, presumably as a development from the southern thatched house, whence "it seems to have been carried northward by tribal movements rather than solely by diffusion, the Arikara and possibly the Mandan being the principal agents."[11]

The hypothesis outlined above is open to serious question. In the first place, the nonuniformity of Pawnee houses with regard to the number of central posts may indicate not immaturity of the trait but rather maturity or even senility, accompanied by a strong tendency on the part of the housebuilders toward breaking away from the old ceremonial number. Recent excavations by the Nebraska Archaeological Survey in very early historic (but prehorse culture) sites on the Loup River in east-central Nebraska apparently indicate that four posts were commonly used in houses of the earlier period, as a central group. The greater freedom in this respect in later times may then have been correlative with other transformations which took place in the later culture of the historic Pawnee. The fact that the Pawnee "never referred to more than four (central posts) in their ceremonies"[12] is probably a survival from the earlier phases

[9] 1924, pp. 247–248.
[10] Ibid., p. 248.
[11] Ibid., pp. 256–257; cf., however, Lowie, 1912, p. 60.
[12] Ibid., p. 248, from unpublished notes of G. A. Dorsey.

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of the tribe's history, instead of a borrowing from the upper Missouri tribes, as Linton's hypothesis would imply. As to the southern origin of the type, it may be stated here that the work of the Nebraska Archaeological Survey on the Republican River during the summer of 1930 revealed the presence of prehistoric square houses with round corners, the superstructure of which was borne on a four-post, central foundation. The nature of this framework suggests a type of earth lodge dissimilar in shape from the historic structure of the Pawnee, but strongly reminiscent of certain square earth-covered houses found by Harrington in southwestern Arkansas.[13] Reported remains of more flimsily built structures, possibly grass houses, in the same district, have not been investigated as yet by the Survey. The square earth lodge was unknown in historic times on the plains, hence its earlier occurrence in both northern and southern Caddoan territory is of especial interest. It suggests the possible development of the circular Pawnee lodge from the square or rectangular type, in turn evolved either from the grass house or perhaps from some wattle and daub prototype. If such is the case, then the historic Pawnee dwelling may prove to be a local development from some earlier widespread Caddoan house type rather than a trait borrowed full-blown from the Arikara and Mandan. It is quite probable that the Arikara carried the trait onto the upper Missouri after their separation from the Skidi, but doubtless they secured the idea from their kindred in what is now central Nebraska. The Mandan and Hidatsa, then, and perhaps the other Siouan tribes concerned, may just as probably have received the earth-lodge complex from the Pawnee through the Arikara.[14] Quite possibly they had little or nothing to do with its original diffusion up the Missouri. Further archeological research in southern Nebraska and in Kansas should throw additional light on this very interesting problem of the origin of the Plains earth lodge.

The skin tipi came into very extensive use after the introduction of the horse and the adoption of a more nomadic hunting life, and was supplemented by the dome-shaped brush shelter. Both have been described in the section on house types in this paper, hence need not be reviewed here.

The underground caches or pits for the storage of food and property were a necessary adjunct to all Pawnee villages. They were of the type common all over the plains, though differing in certain details from those of the Mandan and possibly slightly from those in early prehistoric sites within the Pawnee area. Storage pits are reported also for the North Atlantic coast area,[15] and for certain

[13] 1920, pp. 256–260. Compare Strong, 1935, p. 276; Wedel, 1935, pp. 172–174.
[14] See Lowie, 1912.
[15] Wissler, 1922, p. 263.

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Cayuga sites in central New York.[16] Time and space limitations forbid a comparative study here of the distribution of the cache pit or a discussion of the structural details of its eastern form. However, the occurrence of the trait in two widely separate areas which exhibit certain other cultural parallels is at least a suggestive point.

As was pointed out in the discussion of Pawnee ceramics, there is a remarkable resemblance and perhaps a connection between the pottery of this tribe and the typical wares from Iroquoian sites of western New York. The overhanging collar, the hatched triangle motif in rim decoration, and the globular vessel shape are common to both areas, but appear to be absent in the intervening and surrounding cultures. Clay pipes of highly characteristic type later copied in stone were made by the Iroquoian potters, but among the historic Pawnee stone pipes were the rule.

The stonework generally resembles that of adjoining areas, with few distinctive or specialized forms. An exception is found in the arrowpoints. On protohistoric and some historic Pawnee village sites the small, triangular, unnotched points are decidely predominant; stemmed types are rare, at least prior to 1800 or thereabouts. In northeastern and central Kansas, territory formerly under Pawnee and Wichita dominance, these same points are prevalent. Parker mentions similar thin, delicately chipped triangles or arrowpoints of chert as one of the diagnostics of Iroquoian culture.[17] They are also reported from the Ohio Valley, regarded by Parker as the probable route of the northward migration of the New York Iroquois.[18] The type, as such, is by no means rare, but its preponderance over all other forms in Iroquoian and Caddoan areas is rather striking, and possibly represents another link in the chain of traits connecting the two groups. It may be noted also that pitted discoidals and hammerstones are common to both areas. The Puebloan type of metate, though common in central Kansas, was replaced among the Pawnee by flat or slightly hollowed anvil stones; pestles are rare. Parker states that the Iroquois used a flattened muller and a shallow flattened mortar, or meal stone, as well as anvils.[19] The grooved mauls and axes, as well as ungrooved, polished celts, point eastward, but not necessarily beyond Iowa or Missouri. The presence of catlinite obviously indicates northern contacts, probably by trade rather than through actual visits to the pipestone quarries of southern Minnesota.

Objects of bone and horn conform to plains types but differ occasionally from earlier prehistoric cultures of the Pawnee area.

[16] Skinner, 1921, pp. 43–46.
[17] 1916, p. 484. See Wedel, 1935, p. 247, for the type in Kansas.
[18] Ibid., pp. 482, 495 ff.
[19] 1916, p. 484.

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Shaft straighteners, picks, hide scrapers, fleshing tools, paint brushes, beaming tools, digging implements, horn spoons, all find their counterparts among the Mandan, Dakota, or other nearby plains tribes. The tubular plume holder and roach spreader are similar to those still used by the Comanche, Omaha, Menominee, and others.

The presence of considerable shellwork is frequently taken as indicative of trade relations with peoples on the Gulf coast, as the molluscan forms now found in the streams of Nebraska differ from those recovered by excavation in old village sites. However, silting up of the rivers due to widespread agricultural development may have resulted in the comparatively recent extinction of species formerly common within the area, so that no very remote source for most of the raw shell need be postulated.

Further connections with the eastern woodlands may be detected in the use of wood for carving vessels. For the most part the pieces are simple in shape, showing no resemblances whatever to Pawnee pottery forms. Shallow platters and deep cups and bowls are the only forms yet recovered. The use of the upright wooden mortar, made by hollowing out one end of a section of log, is strikingly reminiscent of the eastern maize area generally. With the exception of the flat anvil stone, the wooden mortar appears to have been the sole means of grinding corn and seeds, replacing entirely the metate found south of the Kansas River.

In the use of bison hair for weaving cloth may be seen another trait which, while not unusual in the bison area as a whole, was most strongly developed in the lower Mississippi region. Presumably it was a part of the original culture complex carried northward by the tribe in its migrations. Twined weaving appears only in the form of reed matting; it is likewise common to the east, along the Mississippi.[20] Coiled basketry, as reported by Weltfish [21] for the Pawnee, has not been found in archeological remains, nor would it be easy, if such were the case, to determine whether the single rod coil foundation prevailed in early as in recent times.[22] Coiling, however, is a western trait, which probably reached the Pawnee and other Caddoan tribes by diffusion through the southwestern or Great Basin peoples.

With regard to mortuary customs the Pawnee uniformly practiced inhumation. The body was generally partially flexed, but there was no fixed orientation for it and no special side on which it was laid. Early prehistoric sites on the Republican River, which show certain similarities to the Pawnee and may be directly related, are asso-

[20] Mason, 1904, p. 231.
[21] 1930, pp. 278–280.
[22] Ibid., pp. 280, 286.

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ciated with ossuaries and also with bundle burials, but yield only limited amounts of material remains, and those mostly fragmentary. This again suggests the southeast as well as the early Iroquoian sites of New York.[23] Ossuary, tree, and scaffold burials were not used by the historic Pawnee.

As will have become obvious by this time, the material traits in Pawnee culture were drawn in largest measure from the east and southeast. Kroeber's recent summary statement regarding plains cultures in general applies peculiarly to the Pawnee, viz, that "the Plains traits that have historic depth . . . seem Woodland, and date from the time when such Plains culture as there was constituted a margin at the fringe of a natural area. The forces which infused this marginal culture, like those of the northern and eastern margins, had their heads in the Southeast."[24] These traits were acquired largely during the residence of the tribe in the old Caddoan habitat on the lower Mississippi and adjacent areas to the west. They sprang from the same basic subpattern as did the Iroquoian, Muskhogean, and related cultures of the Eastern Woodland. As Sapir has suggested on linguistic grounds, the early connections appear to have been especially close between Pawnee and Iroquoian peoples. Kroeber also implies this in pointing out the distribution of the matrilineate in the Eastern Woodlands (Iroquoian-Muskhogean) and in the plains (Pawnee-Hidatsa-Crow).[25] Southwestern or puebloan traits, so far as material evidences are concerned, are almost wholly absent, although certain of them penetrated into north central Kansas. In other words, the Pawnee formerly constituted a part of the Southeastern Woodlands culture area in its more western peripheral phase, retaining and disseminating many of the traits thus acquired throughout the period of their northern residence until the final withering of native plains culture before the European conquest.

[23] Parker, 1916, p. 492.
[24] 1923, p. 396.
[25] Ibid.

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

BIBLIOGRAPHY

ABEL, A. H.
1916. A New Lewis and Clark Map. Geographical Review, vol. I, no. 5, pp. 329-345. New York, 1916.

ALLIS, SAMUEL.
1887. Forty Years Among the Indians and on the Eastern Borders of Nebraska. Transactions and Reports of the Nebraska State Historical Society, vol. II, pp. 133-166. Lincoln, 1887.

ASHLEY, W. H., and SMITH, J. S.
1918. The Ashley-Smith Explorations and the Discovery of a Central Route to the Pacific, 1822-1829. Edit. by H. C. Dale. Cleveland, 1918.

BAILEY, E. H. S.
1902. Great Spirit Spring, Waconda, Mitchell County. University Geological Survey of Kansas, Mineral Waters, vol. VII, pp. 197-200. Topeka, 1902.

BANDELIER, A. F.
1890. Final Report of Investigations among the Indians of the Southwestern United States, pt. I, pp. 44-187. Papers of the Archaeological Institute of America, American Series, No. III. Cambridge, 1890.
1890, a. Contributions to the History of the Southwestern Portion of the United States, Hemenway Southwestern Archaeological Expedition, pp. 179-206. Papers of the Archaeological Institute of America, American Series, No. V. Cambridge, 1890.
1893. The Gilded Man, pp. 229-257. New York, 1893.

BLACKMAN, E. E.
1903. Report of Department of Archaeology. Annual Report of Nebraska State Board of Agriculture for 1902, pp. 294-326. Lincoln, 1903.
1905. Report of Department of Archaeology. Annual Report of Nebraska State Board of Agriculture for 1904, pp. 207-229. Lincoln, 1905.
1906. Archaeological Report for 1905. Annual Report of Nebraska State Board of Agriculture for 1905, pp. 390-400. Fremont, 1906.
1907. Report of the Archaeologist. Proceedings and Collections of the Nebraska State Historical Society, Vol. XV; Series II, vol. X, pp. 323-359. Lincoln, 1907.

BOLTON, H. E.
1914. Athanase de Mezieres and the Louisiana-Texas Frontier, 1768-1780. 2 vols. Cleveland, 1914.

BROWER, J. V.
1898. Quivira. Memoirs of Explorations in the Basin of the Mississippi, vol. I. St. Paul, 1898.
1899. Harahey. Memoirs of Explorations in the Basin of the Mississippi, vol. II. St. Paul, 1899.

BUCKSTAFF, RALPH N.
1927. Stars and Constellations of a Pawnee Sky Map. American Anthropologist, n. s., vol. 29, no. 2, pp 279-285. Lancaster, 1927.

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

113 BUSHNELL, D. I., JR.
1922. Villages of the Algonquian, Siouan, and Caddoan Tribes west of the Mississippi. Bulletin 77, Bureau of American Ethnology. Washington, 1922.
1927. Burials of the Algonquian, Siouan, and Caddoan Tribes West of the Mississippi. Bulletin 83, Bureau of American Ethnology. Washington, 1927.

CATLIN, GEORGE.
1842. Letters and Notes on the Manners, Customs, and Condition of the North American Indians, vol. 2. New York, 1841.

CHARLEVOIX, PIERRE DE.
1903. Journal of a Voyage to North America. Translated from the letters. Chicago, 1903.

CLAYTON, WILLIAM.
1921. William Clayton's Journal, pp. 74–110. Salt Lake City, 1921.

CUILLOT, VICTOR.
1924. A Journey in North America. 2 vols., 1 atlas. Paris, 1826. Translated and reprinted, Firenze, 1924.

COMFORT, A. J.
1873. Indian Mounds near Fort Wadsworth, Dakota Territory. Annual Report of the Smithsonian Institution for 1871, pp. 389–402. Washington, 1873.

CONNELLEY, W. E.
1918. Notes on the Early Indian Occupancy of the Great Plains. Kansas Historical Collections, vol. XIV, pp. 438–470. Topeka, 1918.

DE SMET, PIERRE-JEAN.
1895. New Indian Sketches. New York, 1895.
1905. Life, Letters, and Travels of Father Pierre Jean De Smet, S. J., 1801–1873, vol. III. pp. 974–988. Edited by H. M. Chittenden and A. T. Richardson. New York, 1905.

DODGE, COL. HENRY.
1860. Journal of Colonel Dodge's Expedition from Fort Gibson to the Pawnee Pict Village (1834). American State Papers, Military Affairs, vol. V, pp. 373–382. Washington, 1860.
1861. Report on the Expedition of Dragoons, under Col. Henry Dodge, to the Rocky Mountains in 1835. American State Papers, Military Affairs, vol. VI, pp. 130–146. Washington, 1861.

DORSEY, GEORGE A.
1903. How the Pawnee Captured the Cheyenne Medicine Arrows. American Anthropologist, n. s., vol. 5, no. 4, pp. 644–658. Lancaster, 1903.
1904. Traditions of the Skidi Pawnee. Memoirs of the American Folk-lore Society. New York, 1904.
1905. A Pawnee Personal Medicine Shrine. American Anthropologist, n. s., vol. 7, no. 3, pp. 496–498. Lancaster, 1905.
1906. The Pawnee: Mythology (Part I). Carnegie Institution of Washington, 1906.

DORSEY, J. O.
1886. Migrations of Siouan Tribes. American Naturalist, vol. XX, no. 3, pp. 211–222. Philadelphia, 1886.

DU LAC, PERRIN.
1807. Travels through the two Louisianas in 1801, 1802, and 1803, pp. 47–54. London, 1807.

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

DUNBAR, JOHN, and ALLIS, SAMUEL.
1918. Letters concerning the Presbyterian Mission in the Pawnee Country, near Bellevue, Nebraska, 1831–1849. Kansas Historical Collections, vol. XIV, pp. 570–689 and 690–741, respectively. Topeka, 1918.

DUNBAR JOHN B.
1880, a. The Pawnee Indians: Their History and Ethnology. Magazine of American History, vol. IV, no. 4, pp. 241–281.
1880, b. The Pawnee Indians: Their Habits and Customs. Magazine of American History, vol. V, no. 5, pp. 321–345.
1910. Massacre of the Villazur Expedition by the Pawnees on the Platte, in 1720. Kansas Historical Collections, vol. XI, pp. 397–423. Topeka, 1910.

DU PRATZ, LE PAGE.
1758. Histoire de la Louisiane, tome Premiere, p. 138 and map of Louisiana. Paris, 1758.

FLETCHER, ALICE C.
1899. A Pawnee Ritual used when Changing a Man's Name. American Anthropologist, n. s., vol 1, no. 1, pp. 82–97. Lancaster, 1899.
1902. Star Cult Among the Pawnee. American Anthropologist, n. s., vol 4, no. 4, pp. 730–736. Lancaster, 1902.
1904. The Hako: A Pawnee Ceremony. Twenty-second Report of the Bureau of American Ethnology, pt. 2, pp. 5–368. Washington, 1904.

FLETCHER, ALICE C., and LA FLESCHE, FRANCIS.
1911. The Omaha Tribe. Twenty-seventh Report of the Bureau of American Ethnology, pp. 17–642. Washington, 1911.

FOWKE, GERARD.
1922. Archeological Investigations. Bulletin 76, Bureau of American Ethnology, pp. 57–81. Washington, 1922.

FREMONT, J. C.
1845. Report of the Exploring Expedition to the Rocky Mountains in the Year 1842, and to Oregon and California in the Years 1843–44. Washington, 1845.

GALLATIN, ALBERT.
1836. Transactions and Collections of the American Antiquarian Society, vol. II. Worcester, 1836.

GILLIS, J. L.
1860. Report of the Commissioner of Indian Affairs for 1860. Document no. 33, pp. 92–95. Washington, 1860.

GREGG, JOSIAH.
1845. Commerce of the Prairies, 2d ed. New York, 1845.

GRINNELL, GEORGE BIRD.
1891. Two Pawnian Tribal Names. American Anthropologist, o. s., vol. IV, no. 2, pp. 197–199. Washington, 1891.
1891. Marriage among the Pawnees. American Anthropologist, o. s., vol. IV, no. 3, pp. 275–281. Washington, 1891.
1893. Pawnee Hero Stories and Folk-Tales. New York, 1893.
1913. Some Indian Stream Names. American Anthropologist, n. s., vol. 15, no. 2, pp. 330–331. Lancaster, 1913.
1920. Who were the Padouca? American Anthropologist, n. s., vol. 22, no. 3, pp. 248–260. Lancaster, 1920.

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

HARRINGTON, M. R.
1920. Certain Caddo Sites in Arkansas. Indian Notes and Monographs, Miscellaneous Paper no. 10. Heye Foundation, New York, 1920.

HAYDEN, F. V.
1862. Contributions to the Ethnography and Philology of the Indian Tribes of the Missouri Valley, pp. 345–363. Philadelphia, 1862.
1872. Notes on Indian History, etc. Annual Report of the Smithsonian Institution for 1867, pp. 411–412. Washington, 1872.

HENNEPIN, FATHER LOUIS.
1903. A New Discovery of a Vast Country in America. Edited by R. G. Thwaites, Chicago, 1903.

HOLMES, W. H.
1883. Art in Shell of the Ancient Americans. Second Report of the Bureau of American Ethnology, pp. 179–207, Washington, 1883.
1903. Aboriginal Pottery of the Eastern United States. Twentieth Report of the Bureau of American Ethnology, pp. 59–200, Washington, 1903.

HOUCK, LOUIS.
1909. Report of the Indian Tribes Who Receive Presents at St. Louis, November 15, 1777. The Spanish Regime in Missouri, vol. I, pp. 141 ff. Chicago, 1909.

HOUGHTON, F.
1916. Characteristics of Iroquoian Village Sites of Western New York. American Anthropologist, n. s., vol. 18, no. 4, pp. 508–520. Lancaster, 1916.

IRVING, J. T., JR.
1835. Indian Sketches. 2 vols. London, 1835.

KIDDER, A. V.
1924. An Introduction to the Study of Southwestern Archeology. Published for the Department of Archaeology, Phillips Academy, Andover, Massachusetts, by the Yale University Press, New Haven, 1924.

KROEBER, A. L.
1928. Native Culture in the Southwest. University of California Publications in American Archaeology and Ethnology, vol. 23, no. 9, pp. 375–398. Berkeley, 1928.

LA SALLE, ROBERT.
1927. Nebraska History Magazine, vol. VIII, no. 1, p. 5. Lincoln, 1927.

LESSER, A., and WELTFISH, G.
1932. Composition of the Caddoan Linguistic Stock. Smithsonian Misc. Colls., vol. 87, no. 6, Washington, 1932.

LEWIS, M., and CLARK, W.
1815. Travels to the Source of the Missouri River and across the American Continent to the Pacific Ocean, 1804–1806. 3 vols. London, 1815.
1832. Lewis and Clark's Expedition. American State Papers, Indian Affairs, vol. IV, pp. 705–743. Washington, 1832.
1922. History of the Expedition under the Command of Captains Lewis and Clark, 1804–1806. 3 vols. American Explorers Series. New York, 1922.

LINTON, RALPH.
1922, a. The Thunder Ceremony of the Pawnee. Anthropological Leaflet of the Field Museum, no. 5. Chicago, 1922.
1922, b. The Sacrifice to the Morning Star by the Skidi Pawnee. Anthropological Leaflet of the Field Museum, no. 6. Chicago, 1922.
1923, a. Purification of the Sacred Bundles, a Ceremony of the Pawnee. Anthropological Leaflet of the Field Museum, no. 7. Chicago, 1923.

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

LINTON, RALPH—Continued.
1923, b. Annual Ceremony of the Pawnee Medicine Men. Anthropological Leaflet of the Field Museum, no. 8. Chicago, 1923. 113
1924. Origin of the Plains Earth Lodge. American Anthropologist, n. s., vol. 26, pp. 247–257. Lancaster, 1924.
1926. The Origin of the Skidi Pawnee Sacrifice to the Morning Star. American Anthropologist, n. s., vol. 28, no. 3, pp. 457–466. Lancaster, 1926.

LONG, MAJ. S. H.
1823. Account of an Expedition from Pittsburgh to the Rocky Mountains performed in the years 1819 and 1820. Edwin James edition. 2 vols. Philadelphia, 1823.

LOWIE, R. H.
1912. Some Problems in the Ethnology of the Crow and Village Indians. American Anthropologist, n. s., vol. 14, no. 1, pp. 60–71. Lancaster, 1912.

LUTTIG, J. C.
1920. Journal of a Fur-Trading Expedition on the Upper Missouri, 1812–13. St. Louis, 1920.

MARGRY, PIERRE.
1874. Margry Papers. Memoirs et Documents pour servir a L'Histoire des Origines Francaises des Pays d'Outremer. 6 vols. Paris, 1874.

MARQUETTE, JACQUES.
1900. Of the first Voyage made by Father Marquette. Jesuit Relations and Allied Documents, vol. LIX, pp. 87–103. Edited by R. G. Thwaites. Cleveland, 1900.

MASON, OTIS T.
1904. Aboriginal American Basketry. Report of the U. S. National Museum for 1902, pp. 171–548. Washington, 1904.

MORSE, REV. JEDIDIAH.
1822. A Report to the Secretary of War of the United States, on Indian Affairs, comprising a Narrative of a Tour performed in the summer of 1820. New Haven, 1822.

MURIE, J. R.
1914. Pawnee Indian Societies. Anthropological Papers of the American Museum of Natural History, vol. XI, pt. VIII, pp. 543–644. New York, 1914.

MURRAY, CHARLES A.
1839. Travels in North America during the Years 1834, 1835, and 1836, vol. I. New York, 1839.

OEHLER, GOTTLIEB F., and SMITH, D. Z.
1851. Description of a Journey and Visit to the Pawnee Indians, April 22–May 18, 1851. The Moravian Church Miscellany, 1851–52.

PARKER, A. C.
1916. The Origin of the Iroquois as Suggested by Their Archaeology. American Anthropologist, n. s., vol. 18, no. 4, pp. 479–507. Lancaster, 1916.

PARSONS, ELSIE CLEWS.
1929. Ritual Parallels in Pueblo and Plains Cultures, with a Special Reference to the Pawnee. American Anthropologist, n. s., vol. 31, no. 4, pp. 642–654. Lancaster, 1929.

PIKE, ZEBULON M.
1810. An Account of Expeditions to the Sources of the Mississippi, etc. Philadelphia, 1810.

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

113 PLATT, E. G.
1892. Reminiscences of a Teacher Among the Nebraska Indians, 1843–85. Transactions and Reports of the Nebraska State Historical Society, vol. III, pp. 125–143. Fremont, 1892.
1918. Some Experiences as a Teacher Among the Pawnees. Kansas Historical Collections, vol. XIV, pp. 784–794. Topeka, 1918.

POWELL, J. W.
1891. Indian Linguistic Families of America North of Mexico. Seventh Report of the Bureau of American Ethnology, pp. 58–62. Washington, 1891.

RAU, CHARLES.
1872. Indian Pottery. Annual Report of the Smithsonian Institution for 1866, pp. 346–355. Washington, 1872.

ROBERTS, F. H. H., JR.
1929. Shabik'eshchee Village. Bulletin 92, Bureau of American Ethnology, pp. 110–111. Washington, 1929.

ROYCE, C. C.
1899. Indian Land Cessions in the United States. Eighteenth Report of the Bureau of American Ethnology, pt. 2, pp. 521–964. Washington, 1899.

SAPIR, E.
1929. Central and North American Languages. Encyclopedia Britannica, 14th ed., vol. V, pp. 138–140. New York, 1929.

SIBLEY, MAJOR.
1922. "From a journal to the Pawnee and Kansas Villages, undertaken by an officer of the Factory on the Missouri." Louisiana Gazette, May 16, 1812; reprinted in Nebraska Historical Publications, vol. XX, pp. 5–11, Lincoln, 1922.
1927. Extracts from the Diary of Major Sibley. Chronicles of Oklahoma, vol. V, pp 196–218. Oklahoma City, 1927.

SCHOOLCRAFT, H. R.
1853. History, Condition, and Prospects of the Indian Tribes of the United States, vol. III, pp. 397–402. Philadelphia, 1853.

SKINNER, ALANSON.
1921. Notes on Iroquois Archaeology. Indian Notes and Monographs, Miscellaneous Paper, no. 18. Heye Foundation, New York, 1921.
1921, a. Material Culture of the Menomini. Indian Notes and Monographs, vol. 20. Mus. Amer. Indian, Heye Foundation.

STRONG, WILLIAM DUNCAN.
1935. An Introduction to Nebraska Archeology. Smithsonian Misc. Colls., vol. 93, no. 10. Washington, 1935.

THAYER, GEN. J. M.
1907. My very first Visit to the Pawnee Village in 1855. Proceedings and Collections of the Nebraska State Historical Society, vol. XV: series II, vol. X, pp. 119–127, Lincoln, 1907

THOBURN, J. B.
1927. An Important Archaeological and Historical Discovery. Chronicles of Oklahoma, vol. V, no. 4, pp. 407–413. Oklahoma City, 1927.

THOMAS, A. B.
1935. After Coronado: Spanish Exploration northeast of New Mexico, 1696–1727. Norman, University of Oklahoma Press, 1935.

11:Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

TRUTEAU, JEAN BAPTISTE.
1914. Journal of Jean Baptiste Truteau on the Upper Missouri, Premiere Partie, June 7, 1794–March 26, 1795. American Historical Review, vol. XIX, no. 2, pp. 299–333. New York, 1914.

VILLIERS, BARON MARC DE.
1921. Le Massacre de l'Expedition Espagnole du Missouri (11 Aout 1720). Journal de la Societe des Americanistes de Paris, n. s., vol. XIII, pp. 239–255. Paris, 1921.

VIVIER, FATHER.
1900. The Panismahas in 1750. Jesuit Relations and Allied Documents, vol. LXIX, pp. 225–229. Ed. by R. G. Thwaites, Cleveland, 1900.

WEDEL, WALDO R.
1935. Reports on Fieldwork by the Archaeological Survey of the Nebraska State Historical Society, May 1–July 23, 1934. Nebraska History Magazine, vol. 15, no. 3, pp. 132–255.

WELTFISH, G.
1930. Coiled Gambling Baskets of the Pawnee and other Plains Tribes. Indian Notes, vol. VIII, no. 3, pp. 277–295. Heye Foundation, New York, 1930.

WHARTON, MAJ. CLIFTON.
1844. A Journal of a March of a Detachment of the 1st Dragoons, to the Pawnee Country, under Major Wharton in August and September, '44. Photostat copy in MSS File of the Nebraska Historical Society. Also in Kansas Historical Collections, vol. XVI, pp. 272–305, Topeka, 1925.

WILL, G. F., and HYDE, GEORGE E.
1917. Corn Among the Indians of the Upper Missouri. St. Louis, 1917.

WILL, G. F., and SPINDEN, H. J.
1906. The Mandans. Peabody Museum Papers, vol. III, no. 4, pp. 79–219, Cambridge, 1906.

WINSHIP, G. P.
1896. The Coronado Expedition. Fourteenth Report of the Bureau of American Ethnology, pt. 1, pp. 339–598, Washington, 1896.

WISSLER, CLARK.
1910. Material Culture of the Blackfoot Indians. Anthrop. Pap., Amer. Mus. Nat. Hist., vol. 5, pt. 1. New York, 1910.
1922. The American Indian. 2d ed. Oxford and New York, 1922.
1927. North American Indians of the Plains. Handbook Series No. 1, 3d ed., American Museum of Natural History, New York, 1927.

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EXPLANATION OF PLATES

PLATE 1.—Pawnee earth lodge and house site. *a*, earth lodge near Pawnee, Okla., in 1905. Photo by Nebraska Historical Society. *b*, general appearance of lodge floor, house 1, Hill site; diameter 44 feet, depth 16 inches. The center has been excavated slightly below the floor level.

PLATE 2.—Vegetal material and textiles from the Hill site. *a*, tubers of *Apios tuberosa*; *b*, seeds of bush summer squash (*Cucurbita pepo melopepo*); *c*, pits of chokecherry (*Prunus virginiana*); *d*, pits of wild plum (*Prunus americana*); *e*, grains of charred flint corn (*Zea mays*); *f*, charred corncobs; *g*, *i*, fragments of bison-hair textile; *h*, hank or rope of bison hair; *j–l*, rush matting.

PLATE 3.—Pawnee vessels from various sites. *a* and *c* are from Palmer site; *a* is 4½ inches high and 4⅞ inches in maximum diameter; *c* is 4⅛ inches high by 4⅞ inches in diameter; *b* and *d* are from the Hill site, both restored; *b* is 3¾ inches by 3¼ inches across; *d* is 7 inches tall and 6 inches in diameter.

PLATE 4.—Complete vessels, probably Pawnee. *a* is 9 inches tall and 7¾ inches in diameter and shows all of the best diagnostics for Pawnee ware in both form and ornamentation; found on Prairie Creek, near Archer, Nebr. *b* is 5¾ inches high by 5⅛ inches across; found in the Cedar River, near Fullerton, Nebr., and is of uncertain origin. Nebraska Historical Society collections.

PLATE 5.—Pawnee type rim sherds from various historic sites. *a–f*, Hill site; *g*, Horse Creek; *h–n*, Palmer site. *b*, *d–f*, *i*, *k*, illustrate the typical rim design; *a*, *h*, *l*, *n*, show the herringbone motif, second in abundance. Nearly all have lip indentations.

PLATE 6.—Selected rim sherds from Burkett site. All bear lip indentations. Note similarity of *b*, *h*, *j*, *l*, to historic Pawnee motifs (preceding plate). Handles occur on all but *h*, *j*, *l*, *n*.

PLATE 7.—Stonework from Hill site. *a–m* are from graves, one being nearly always in or near the left hand of every adult male skeleton. *a*, *f* 2½ inches long; *j* is 5½ inches long. *n–t* are arrowshaft buffers, of dark-brown coarse sandstone. In *p*, *q*, *r* are shown three perfectly matched pairs, each as found; they measure 4½, 7½, and 5 inches in length, respectively.

PLATE 8.—Pipes and mortuary offerings, various sites. *h*, *i* are from Burkett site; all others from Hill site. They are made of catlinite or some other fine-grained red stone; *a* is of gray material, *g* of coarse red sandstone. *f* is 4¾ inches long with a square-topped bowl 1⅞ inches tall; found with a child burial. *i* is less than 1 inch long. Note straight specimen of cloudblower type, *b*; also perforated keel in *j*, groove about outer end of *h*, and small loop on top of *i*, for attachment of a thong. *l*, gray sandstone pipe, 2⅝ inches tall by 1¾ inches long. *m*, perforated or grooved shell objects probably worn as ear or hair ornaments; longest pair 4½ inches long and three-eighths inch in diameter. *n*, blue glass trade beads, probably obtained from Hudson Bay Company; they are about the size of a pea, very crude, and blue, red, or transparent in color.

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

172 321 412 PLATE 9.—Bonework from historic Pawnee sites. *a* is a 12½-inch pick made of the ulna of a bison; *b*, hide-tanning tool; *c*, two small picks made of deer antler, each about 7 inches long; *d*, arrowshaft straighteners made of bison rib; *e*, bone awls; *f*, hide scraper of elk horn, 12 inches long. *g*–*n*, bone paint brushes cut from joints of bison and other large animals; none measures more than 2 inches in greatest dimensions. *f*, is from the Palmer site; the other specimens are from the Hill site.

PLATE 10.—Bone tools from historic Pawnee sites. *a*–*d*, digging tools made from bison scapulae. *a*, from the Hill site, measures 14 inches by 7 inches and was originally square-bladed; *b*, from the Palmer site, is 11 inches long and 6 inches wide; *c* and *d* are from a cache east of Genoa, *d* measuring 15 inches by 6 inches. *e*–*k*, fleshing tools; *e* and *k* are each 9 inches long, *i* is 6½ inches, and all are finely notched on the edges. Note perforation in *j* for passage of a thong about the wrist of the operator. *e*, *j*, and *k* from Palmer site; *f*, *g*, Hill site; *h*, *i*, Clarks site.

172 764 PLATE 11.—Pawnee burials. *a*, burial 3, Hill site, showing fragments of broken cradle board (?) and rush matting which covered remains; *b*, burial 3, Hill site, after removal of covering; *c*, burial 2, Hill site, showing old powder cannister or canteen back of head; *d*, burial at the Palmer site, with a complete pot as the sole mortuary offering.

172 177 411 412 PLATE 12.—Metal trade material from the Hill site. Historic Pawnee. *a*, army canteen of early nineteenth century type from burial 2 (see p. 92 and pl. 11, *c*); *b*, *c*, iron lance heads from caches; *c*, hammer from flintlock; *d*, bridle bit; *f*, arrowpoints cut from iron hoe blades; *g*, three lead rings (see pp. 79 and 92); *h*, lead pistol ball; *i*, piece of gun barrel; *j*, belt buckle; *k*, small chisel; *l*, *frizel* from flintlock; *m*, iron hoe of type usually found on historic Pawnee sites, this specimen with remains of charred wooden handle still visible in the socket.

11: Wedel A-4, 5 (1930) 1936

NQ18 Pawnee NQ18

BUREAU OF AMERICAN ETHNOLOGY BULLETIN 112 MAP 1

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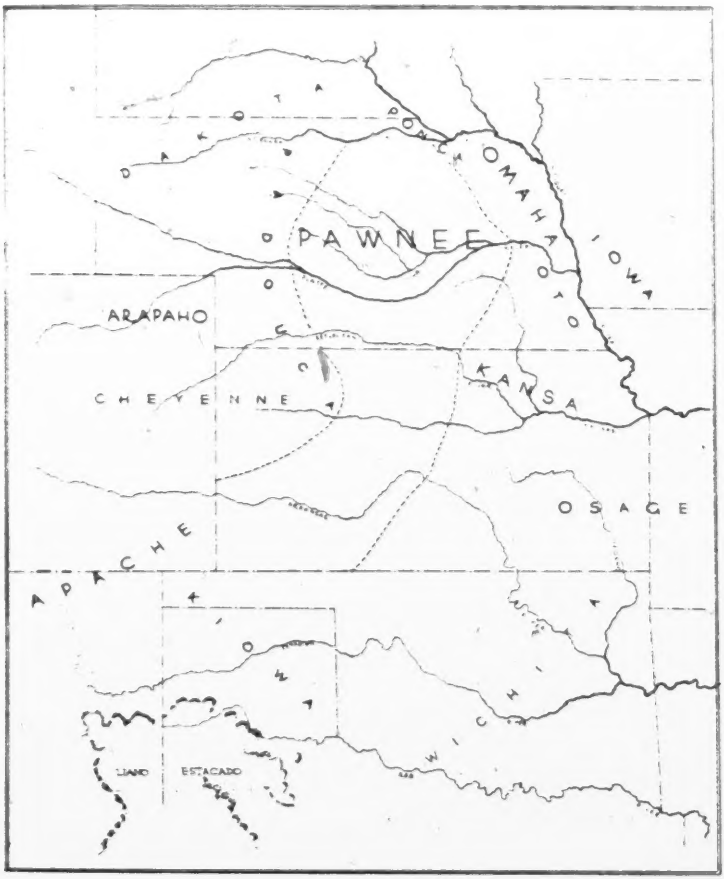

TRIBAL MAP OF THE CENTRAL PLAINS ABOUT 1800.

[End Map 1.]

11: Wedel
102, 131, 133, 172

NQ18 Pawnee NQ18

Chart of Positions of End Map 2

Sec. A	Sec. B	Sec. C	Sec. D	Sec. E

11: Wedel A-4, 5 (1930) 1936

NQ18 Pawnee NQ18

BUREAU OF AMERICAN ETHNOLOGY

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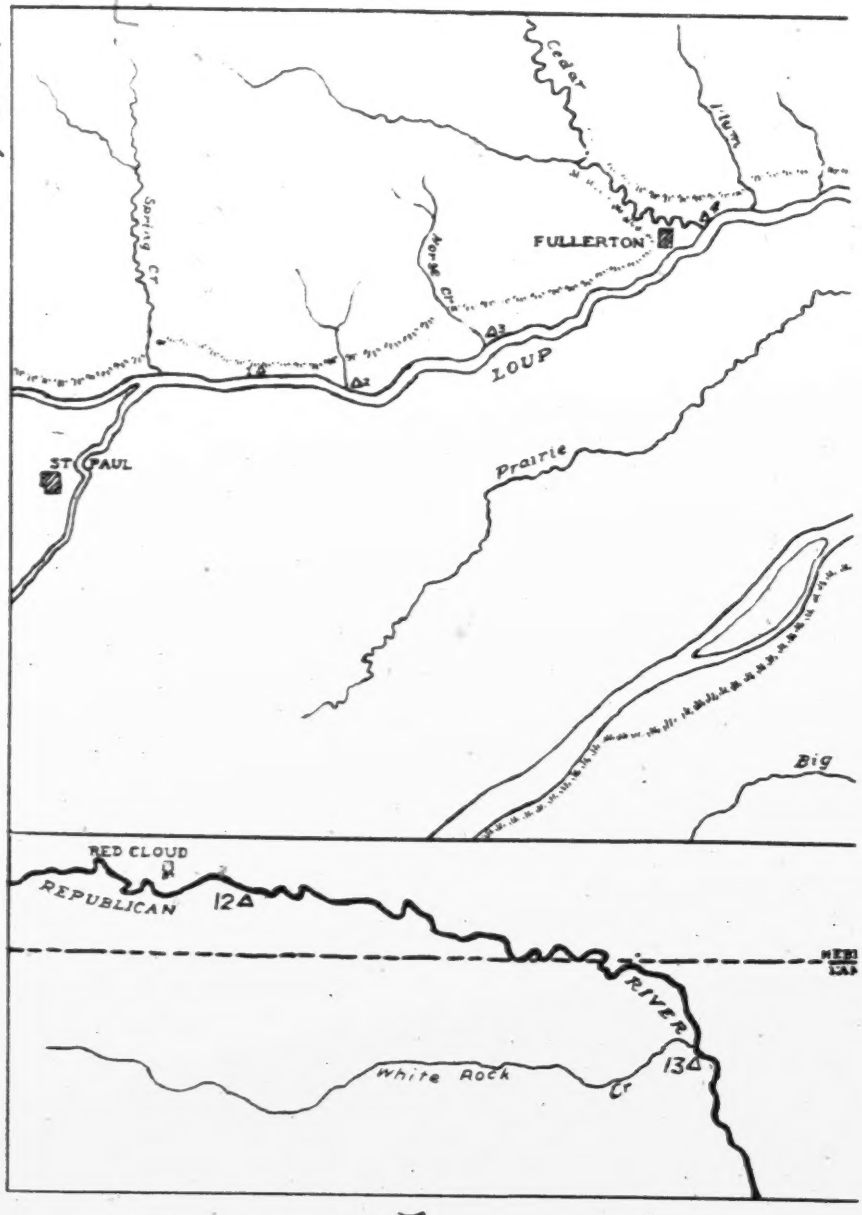

[End Map 2 (A)]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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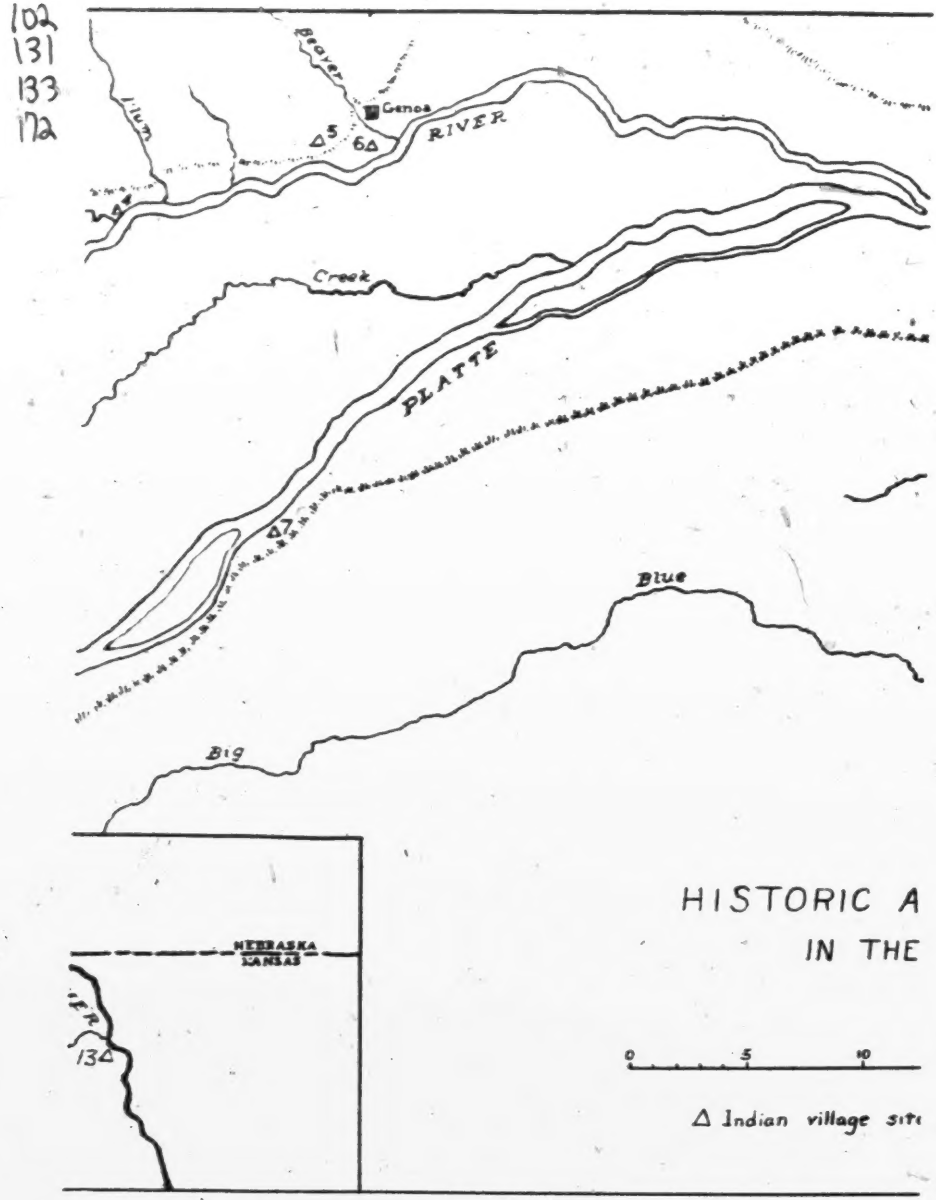

[End Map 2(B)]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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TORIC AND LATE PREHISTORIC SITES
IN THE PAWNEE COUNTRY

10 15 20 25 30 35 40
Scale of Miles

an village sites River bluffs Modern cities

ORIC AND PROTOHISTORIC SITES IN THE NORTHERN PAWNEE AREA.

Based on early maps and journals, and on archeological investigations.

[End Map 2(C)]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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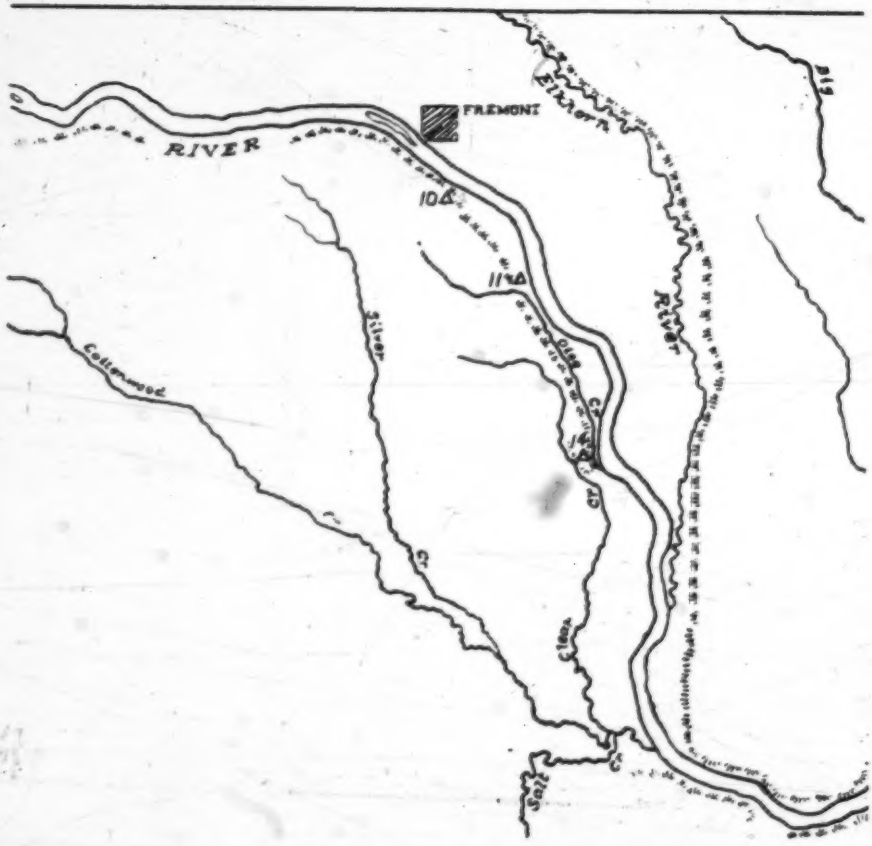

SITES

KEY TO S
Pawnee unless otherw

1. Palmer site
2. Cottonwood Creek site
3. Horse Creek site
4. Fullerton site
5. Burkett site (?)
6. Genoa site
7. Clarks site

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[End Map 2 (D)]

11: Wedel A-4, 5 (1930) 1936

NQ18 Pawnee NQ18

BULLETIN 112 MAP 2

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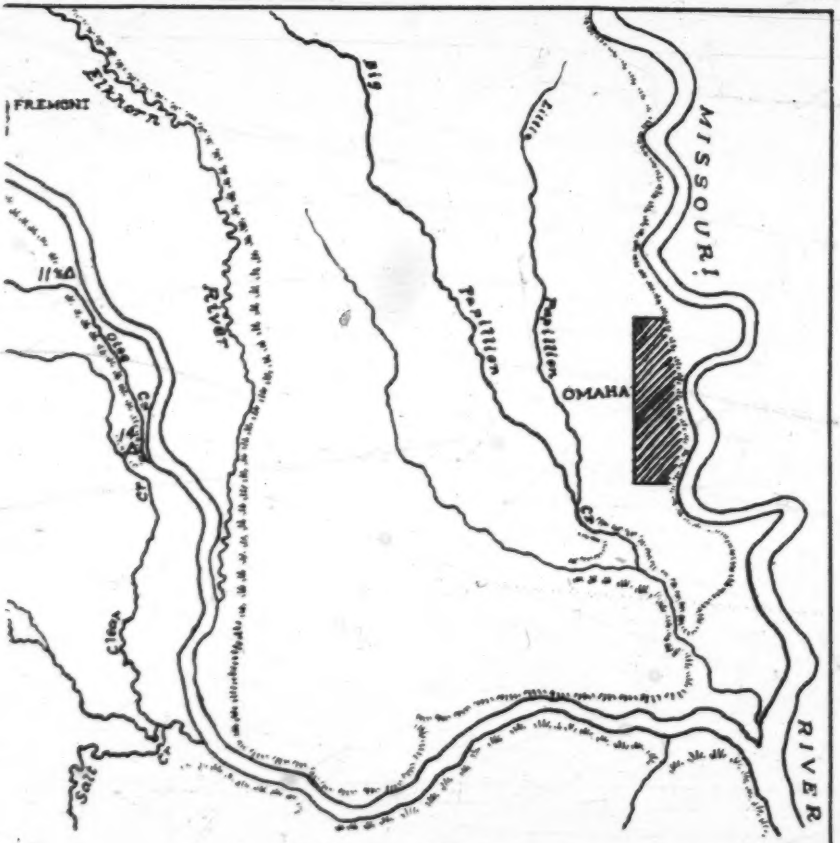

KEY TO SITES

Pawnee unless otherwise indicated

1. Palmer site
2. Cottonwood Creek site
3. Horse Creek site
4. Fullerton site
5. Burkett site (?)
6. Genoa site
7. Clarks site
8. Schuyler site (?)
9. Linwood site
10. McClaine site
11. Leshara site
12. Hill site
13. Kansas Monument site
14. Yutan site (Oto)

[End Map 2(E)]

11: Wedel A-4, 5 (1930) 1936

NQ18 Pawnee NQ18

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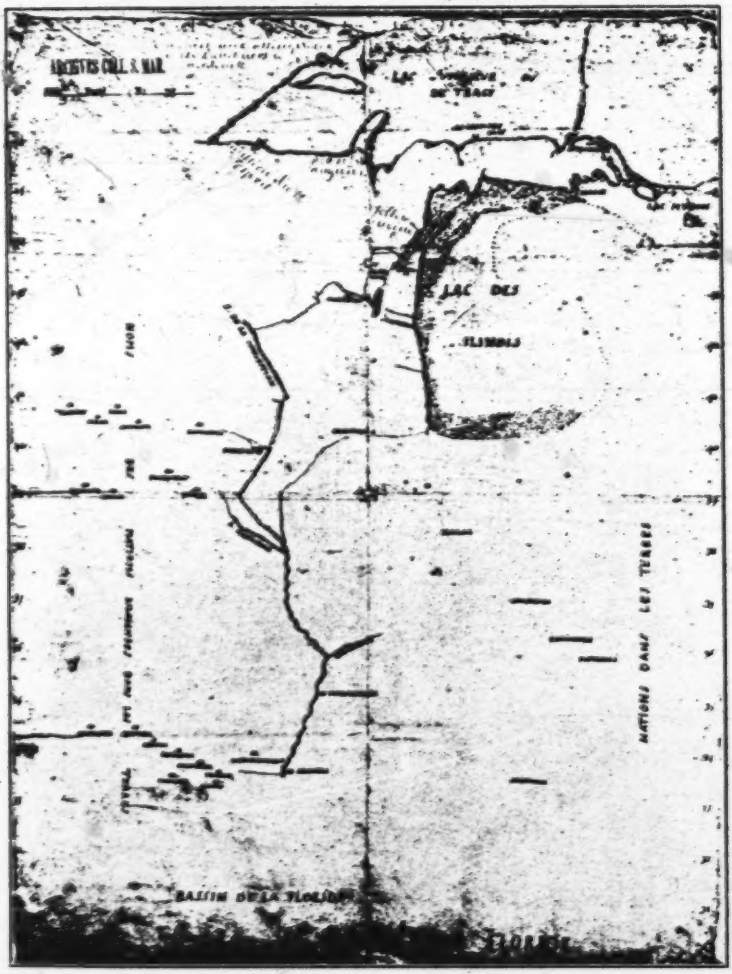

MARQUETTE'S MAP, 1673–74.

From the Jesuit Relations, volume LIX, page 168.

[End Map 3]

11: Wedel A-4, 5 (1930) 1936

NQ18 Pawnee NQ18

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LE SEUER'S MAP, 1701.

From the South Dakota Historical Collections, volume I, page 49.

[End Map 4]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

BUREAU OF AMERICAN ETHNOLOGY

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DU PRATZ'S MAP OF LOUISIAN
From Histoire de la Louisiane, tome premi

[End Map 5(A)]

11: Wedel A-4, 5 (1930) 1936

NQ18 Pawnee NQ18

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RATZ'S MAP OF LOUISIANA, 1757.

oire de la Louisiane, tome premiere, page 138.

[End Map 5(B)]

11: Wedel A-4, 5 (1930) 1936

NQ18 Pawnee NQ18

BUREAU OF AMERICAN ETHNOLOGY

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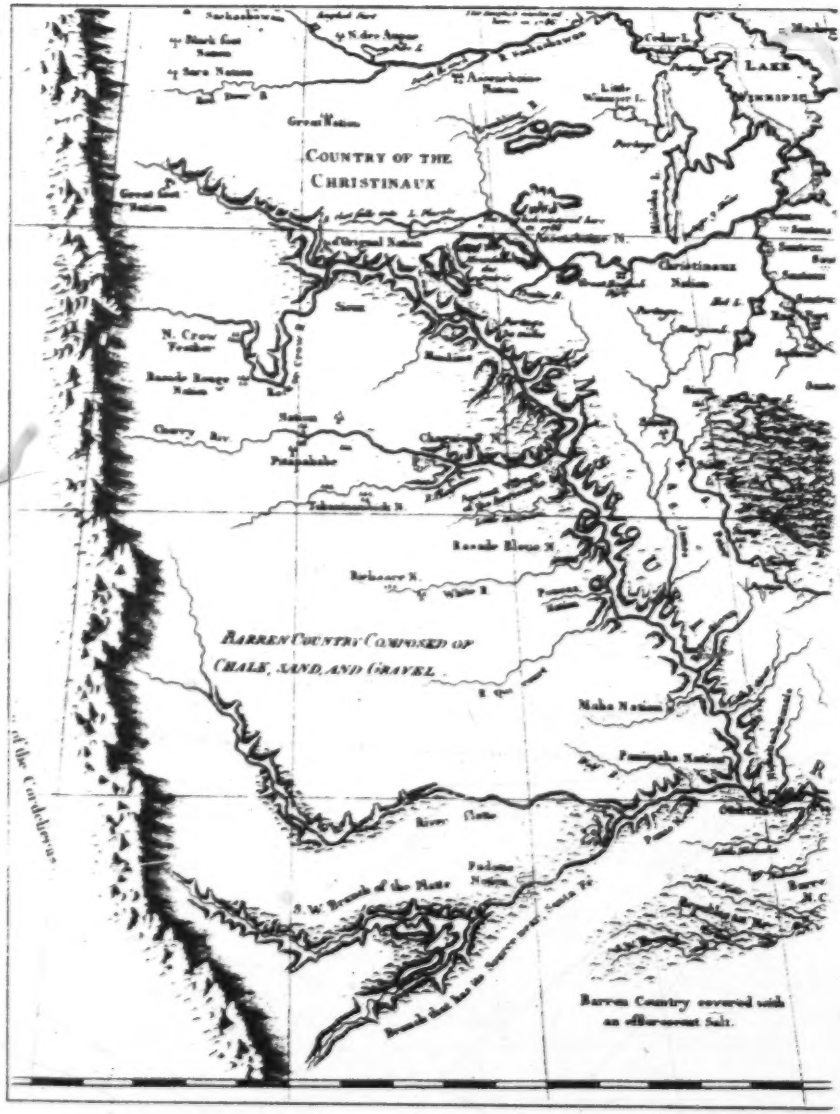

COLLOT'S MAP, 1796.
From a Journey in North America, volume

[End Map 6(A)]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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COLLOT'S MAP, 1796.
urney in North America, volume I, page 281.

[End Map 6(B)]

11: Wedel A-4, 5 (1930) 1936

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BUREAU OF AMERICAN ETHNOLOGY

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DU LAC'S MAP OF THE MISSOU

From Travels through the Two Lou

[End Map 7(A)]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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C'S MAP OF THE MISSOURI, 1802.
n Travels through the Two Louisianas.

[End Map 7B]

11: Wedel A-4, 5 (1930) 1936

NQ18 Pawnee NQ18

BUREAU OF AMERICAN ETHNOLOGY

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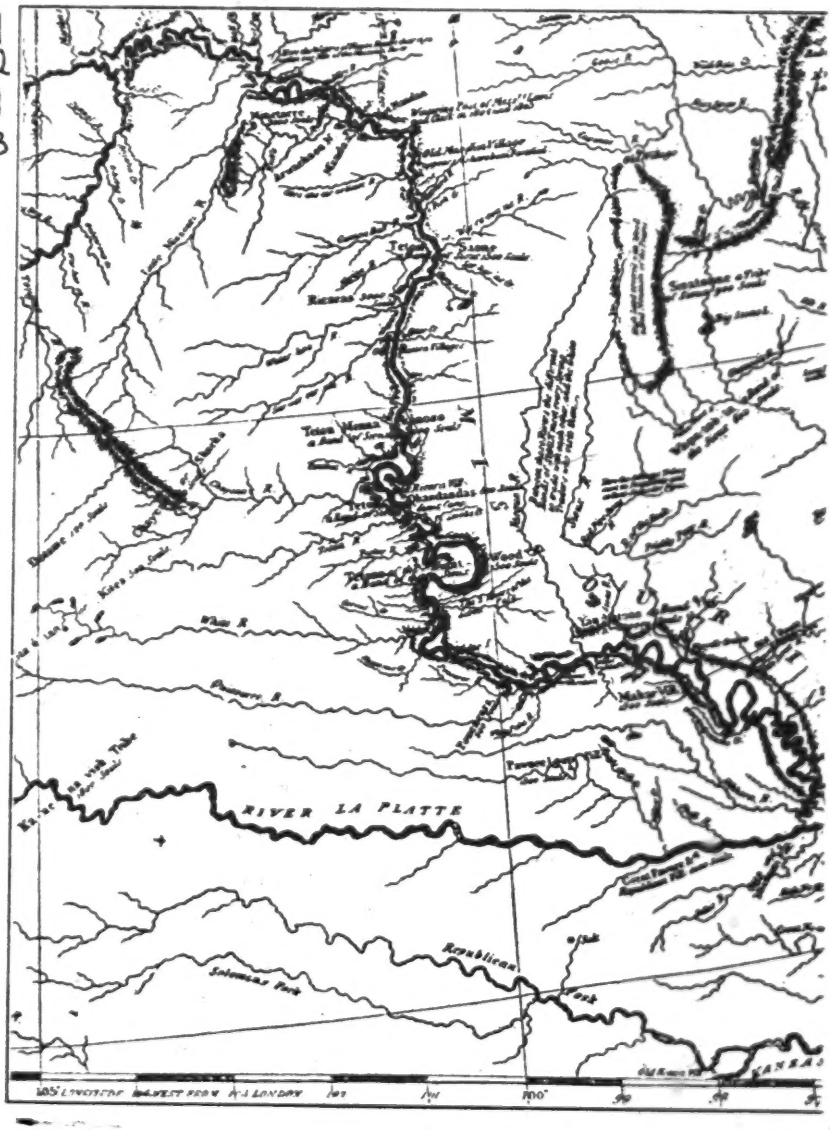

LEWIS AND CLARK'S MAP.
From Travels to the Source of the Missouri

[End Map 8(A)]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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IS AND CLARK'S MAP, 1804.
to the Source of the Missouri River, volume I.

[End Map 8(B)]

11: Wedel A-4, 5 (1930) 1936

NQ18 Pawnee NQ18

BUREAU OF AMERICAN ETHNOLOGY

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PIKE'S MAP, 1806.

From An Account of Expeditions to the Sources o

[End Map 9(A)]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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PIKE'S MAP, 1806.
of Expeditions to the Sources of the Mississippi, etc.

[End Map 9(B)]

11: Wedel A-4, 5 (1930) 1936

NQ18 Pawnee NQ18

BUREAU OF AMERICAN ETHNOLOGY

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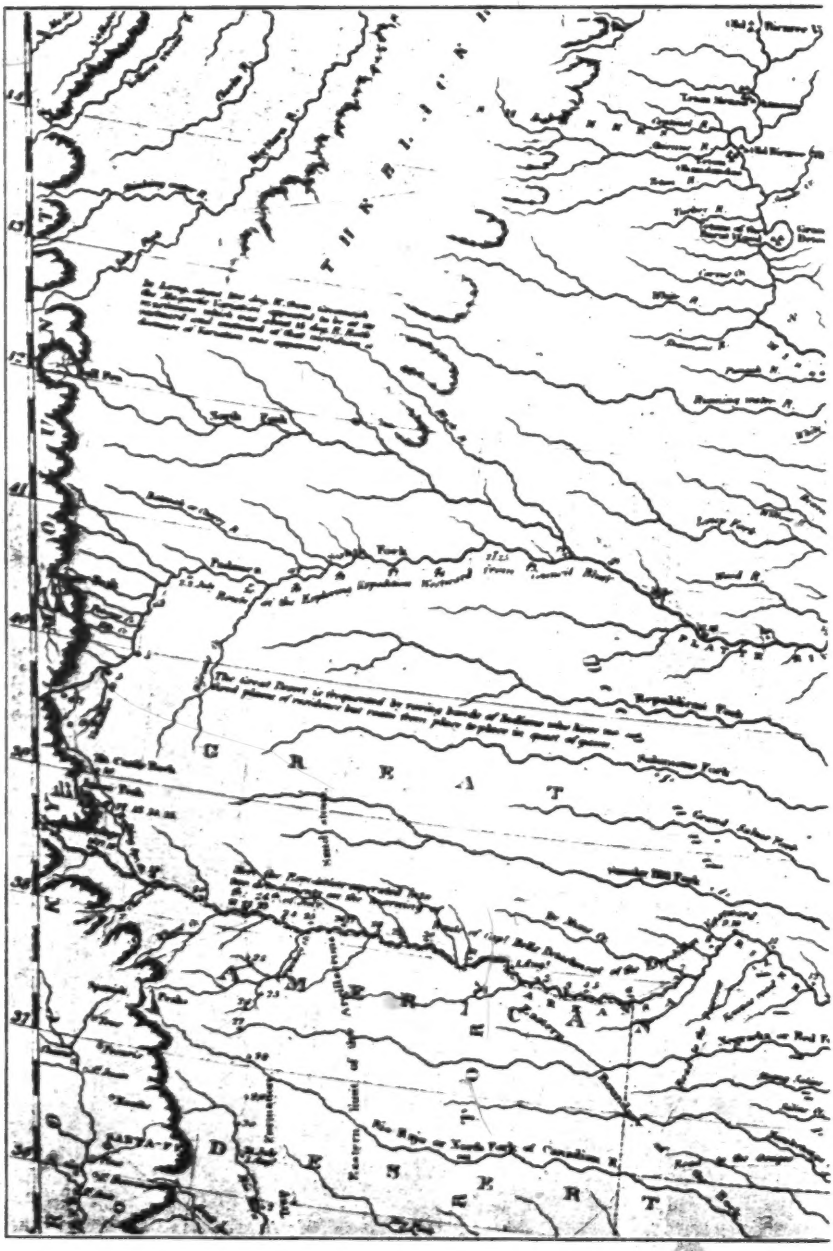

LONG'S MAP, 1819.

From Account of an Expedition from Pittsburgh to the

[End Map 10 (A)]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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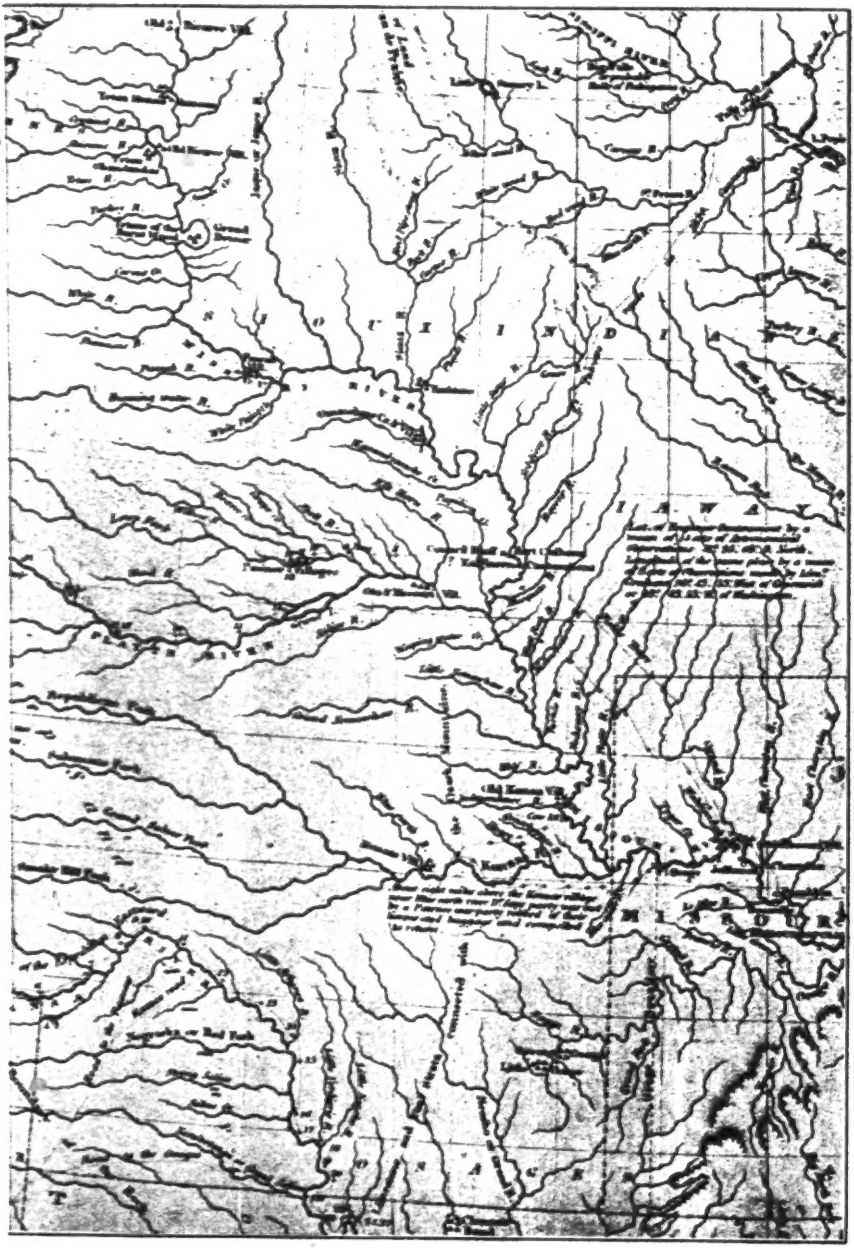

LONG'S MAP, 1819.

pedition from Pittsburgh to the Rocky Mountains, atlas.

[End Map 10(B)]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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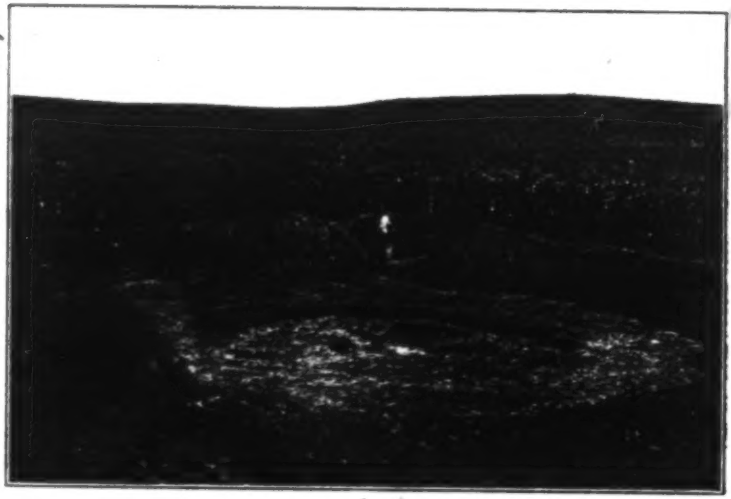

MODERN PAWNEE EARTH LODGE AND EXCAVATED HISTORIC HOUSE SITE.

[End Plate 1]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

VEGETABLE MATERIAL AND TEXTILES FROM THE HILL SITE (HISTORIC PAWNEE).

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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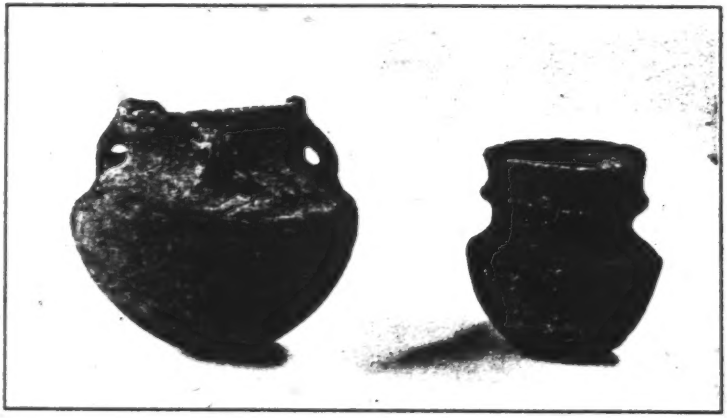

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HISTORIC PAWNEE VESSELS FROM VARIOUS SITES.

[End Plate 3]

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COMPLETE VESSELS, PROBABLY PAWNEE.

[End Plate 4]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

11: Wedel A-4, 5 (1930) 1936

NQ18 Pawnee NQ18

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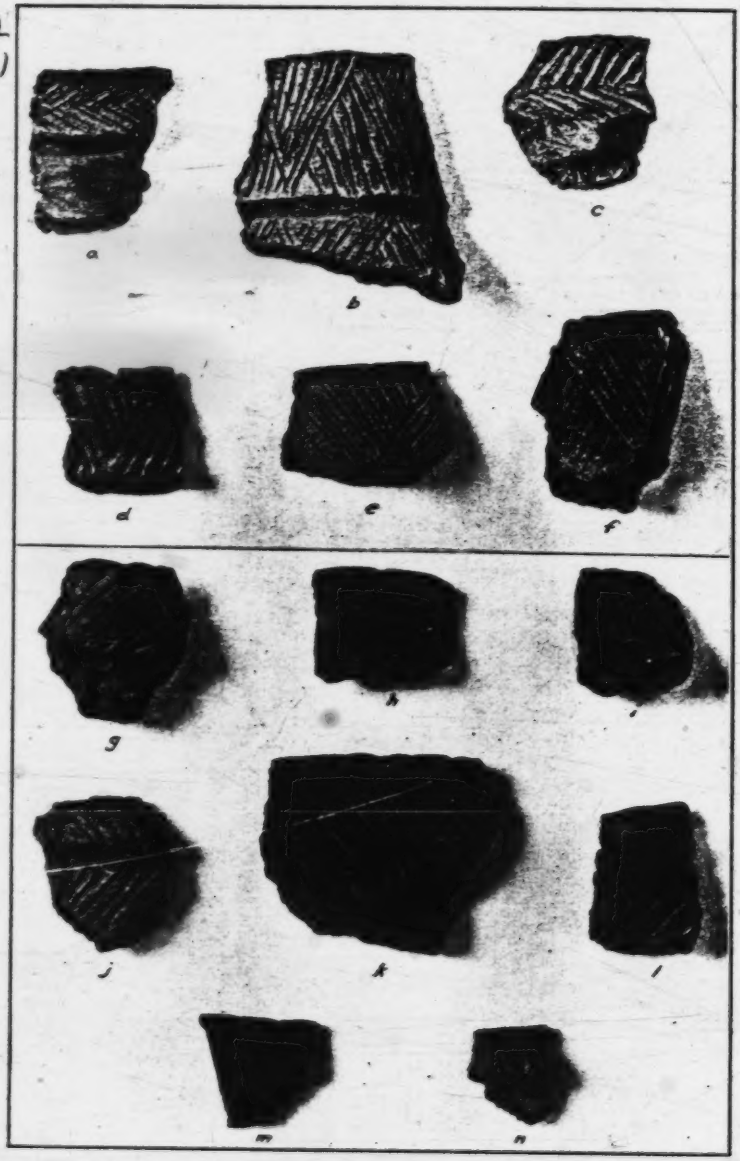

PAWNEE TYPE RIM SHERDS FROM VARIOUS HISTORIC SITES.

[End Plate 5]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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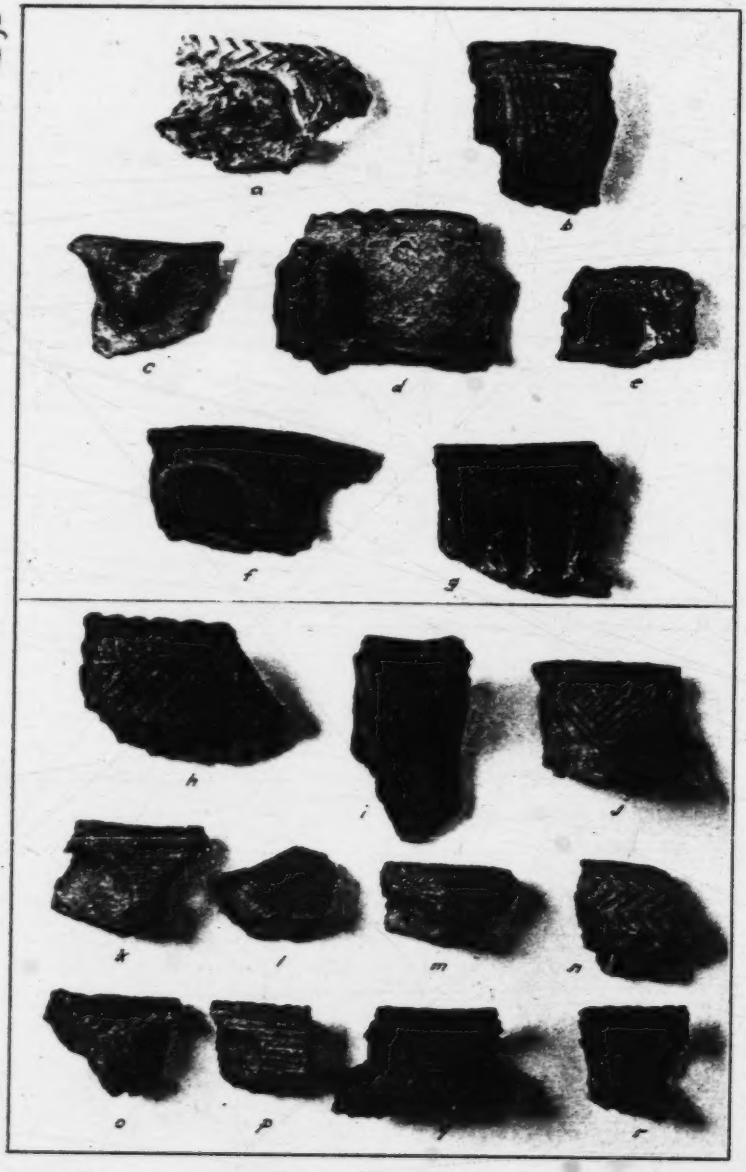

SELECTED RIM SHERDS FROM BURKETT SITE (PROTOHISTORIC PAWNEE).

[End Plate 6]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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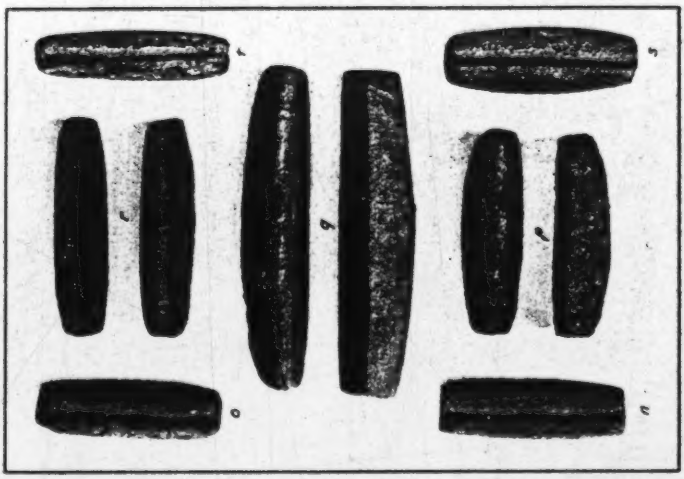

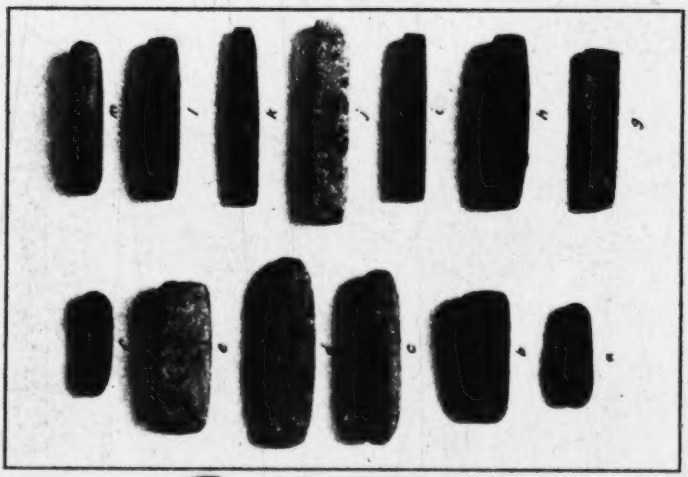

STONEWORK FROM HILL SITE (HISTORIC PAWNEE).

[End Plate 77

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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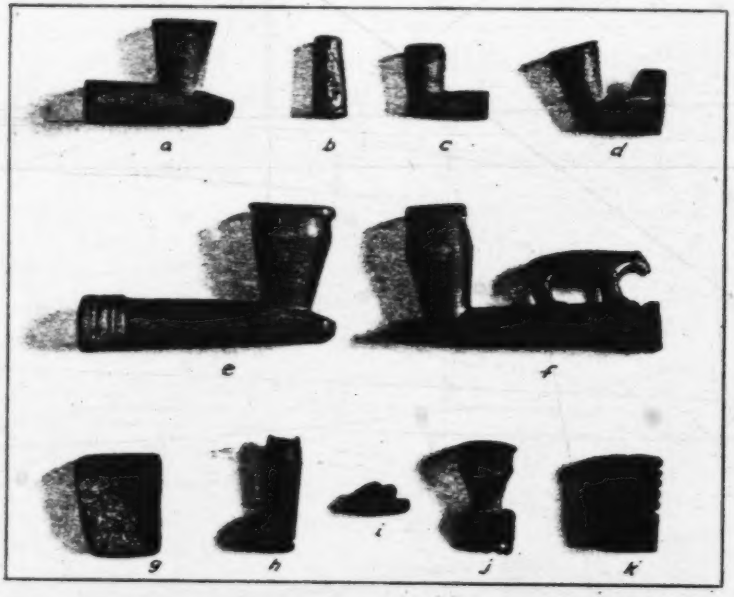

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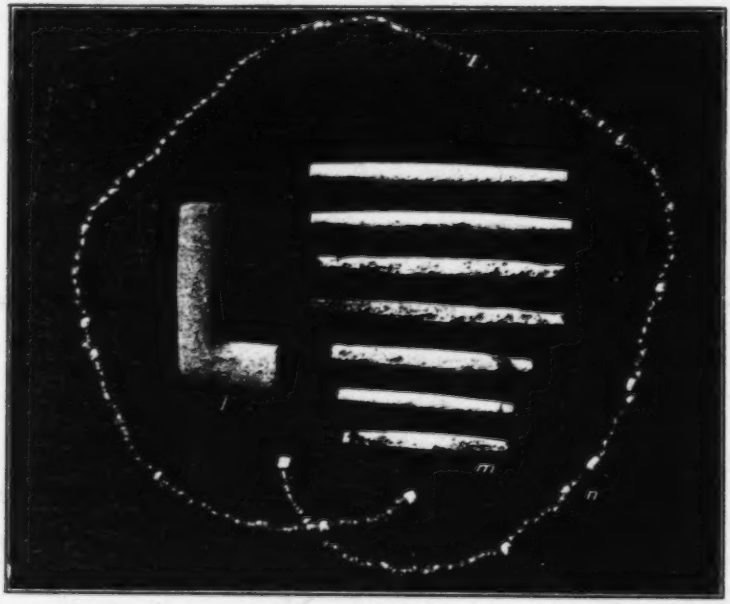

PIPES AND MORTUARY OFFERINGS, VARIOUS SITES (HISTORIC PAWNEE).

[End plate 8]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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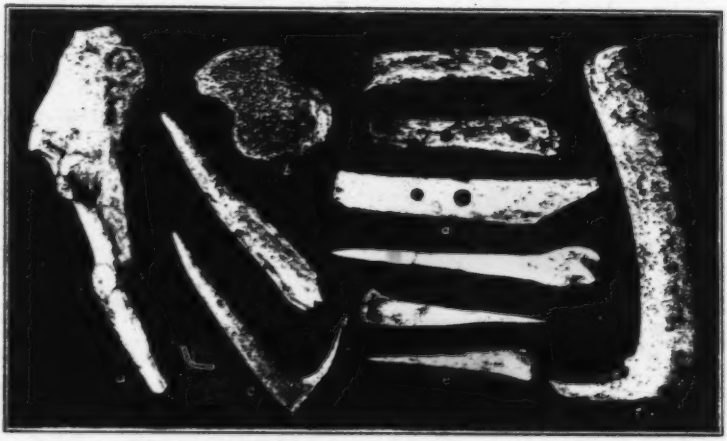

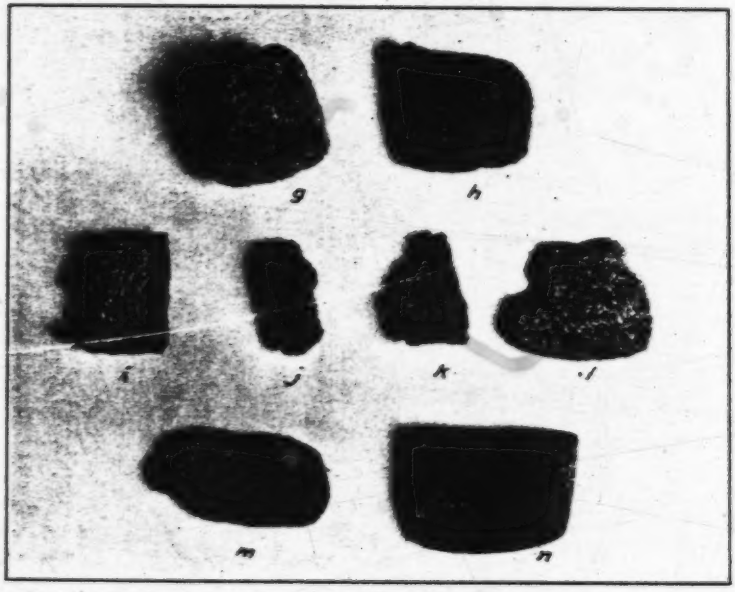

BONEWORK FROM HISTORIC PAWNEE SITES.

[End Plate 9]

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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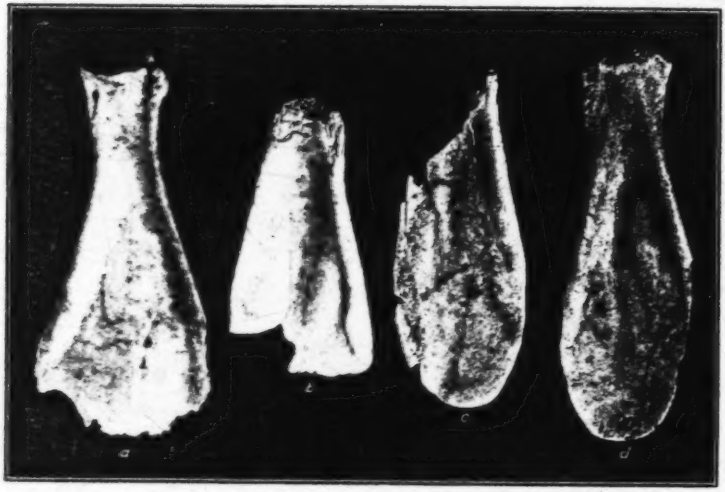

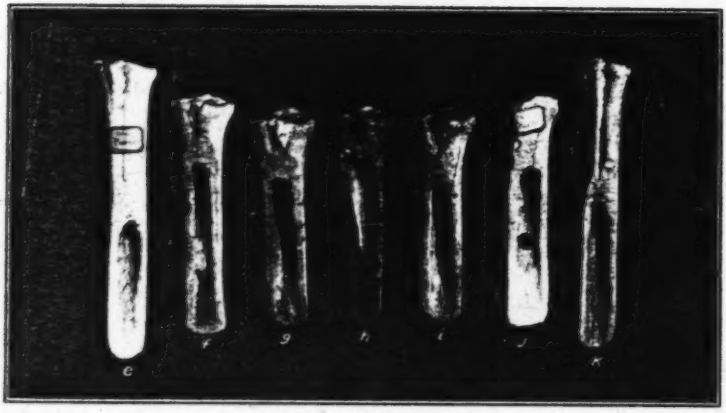

BONE TOOLS FROM HISTORIC PAWNEE SITES.

[End Plate 10]

PAWNEE BURIALS (HISTORIC SITES).

11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

[End Plate 11]

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11: Wedel A-4, 5 (1930) 1936
NQ18 Pawnee NQ18

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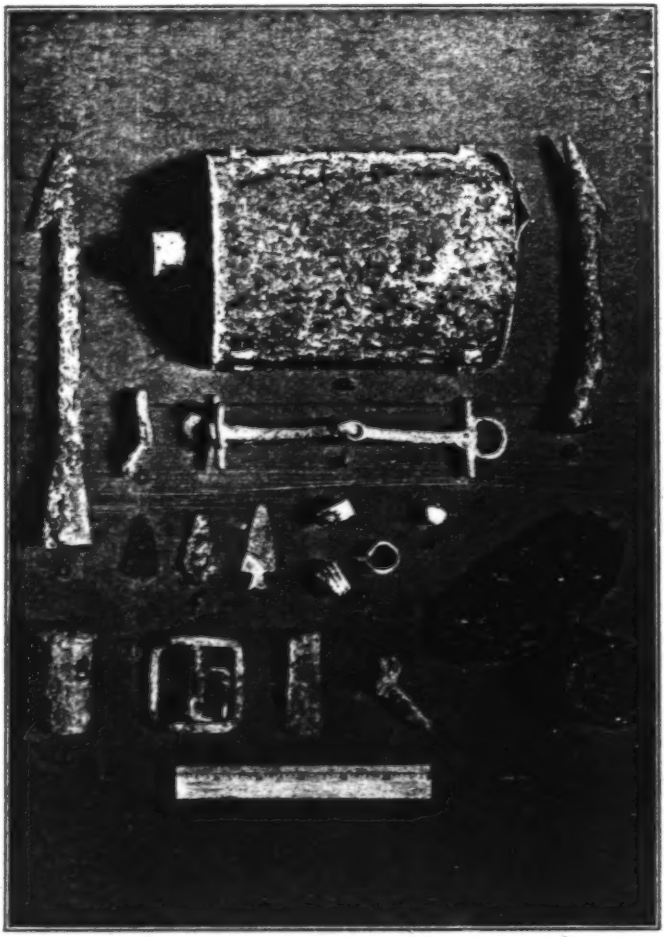

METAL TRADE MATERIAL FROM THE HILL SITE (HISTORIC PAWNEE).

[End Plate 12]

[For a resume of Pawnee archeology, see category 116, pp. 23-102. --Analyst]